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The Wehl family of South Australia and their botanical connections with "Dear Uncle" Baron Ferdinand von Mueller

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Abstract: Dr Eduard Wehl and Clara Wehl (*née* Mueller) and their children hold a unique position in the history of South Australian botany because of their association with Clara's brother and the children's uncle, Baron Ferdinand von Mueller, Australia's most significant botanist of the nineteenth century. Both Wehl parents and six of their twelve surviving children collected botanical specimens for Mueller and about 1200 herbarium specimens have been located with most being held in the National Herbarium of Victoria. The majority of specimens were collected in the vicinity of Mount Gambier and Lake Bonney, South Australia. As well as collecting botanical specimens, two daughters, Marie Magdalene Wehl and Henrietta Jane Wehl, illustrated plants and fungi. About 300 illustrations have survived. Of these, about 240 are of flowering plants and contained in three sketchbooks, two of which are at the National Herbarium of Victoria and one at the State Herbarium of South Australia. Marie made a speciality of illustrating fungi, and 36 illustrations are included in an album in the Natural History Museum, London, and 25 others are held as either loose illustrations or associated with herbarium specimens in the National Herbarium of Victoria. Specimens collected by the Wehls have been used in the typification of at least 23 species names. The family is commemorated in three taxa: Clara Wehl in the marine alga *Gigartina wehliae* Sond.; Eduard and Clara Wehl jointly in the plant genus *Wehlia* F.Muell. [= *Homalocalyx* F.Muell.]; and Marie Wehl in the fungus *Agaricus wehlianus* F.Muell. ex Cooke [= *Pluteus wehlianus* (F.Muell. ex Cooke) Sacc.].

In this paper we provide a brief history of the Wehl family in South Australia. We assess the herbarium specimens collected by them, examine their illustrations and determine the connections between them and their current importance for typification. Underlying this, we consider the contribution made by the Wehl family toward the botanical work of Baron Ferdinand von Mueller.

Keywords: Wehl, Clara, Eduard, Henrietta, Louise, Marie, Baron Ferdinand von Mueller, plant collectors, plant illustrators, South Australia, fungi, algae, Lake Bonney, Mount Gambier

Introduction

> A few plants, particularly the minute annuals, dried for me, will be always welcome, as likely showing new localities of rarer species, which would be recorded under your honoured name in my works.[1]

The contributions of amateur botanists have been crucial to the advancement of taxonomic research in Australia (Barker & Barker 1990), and the engagement and involvement of interested laypersons was a significant factor in the success and productivity of Australia's most significant nineteenth-century botanist, Baron Ferdinand von Mueller (Maroske & Vaughan 2014) (Fig. 1). Mueller's immediate family, including his youngest sister Clara Wehl (*née* Mueller) (Fig. 2), her husband Dr. Eduard Wehl (Fig. 3) and six of their surviving twelve children (Table 1), were active in botanical collecting for their "Dear Uncle".[2] Two of Mueller's nieces, Marie Magdalene Wehl and Henrietta Jane Wehl,[3] were enthusiastic flower and fungi illustrators, focusing on the flora of the Mt Gambier and Lake Bonney areas in South Australia. This research examines the Wehl family's interactions with Ferdinand Mueller and their contribution to Australian botany through their botanical collections and illustrations.

1 F. Mueller to Louise Wehl, 10 Sep. 1884 (Mueller Correspondence, Royal Botanic Gardens Victoria, RBGV).

2 F. Mueller to Louise Wehl, 29 Sep. 1884 (Mueller Correspondence, RBGV); F. Mueller to Louise Wehl, 25 Oct. 1887 (Mueller Correspondence, RBGV); F. Mueller to Louise Matthiessen (*née* Wehl), 2 July 1896 (Mueller Correspondence, RBGV).

3 Sometimes given as Henriette, though Henrietta is used in Baptisms solemnized in the Parochial District of Mount Gambier, South Australia in the year 1868 (Millicent Library Collection).

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Fig. 1. Ferdinand von Mueller, undated. Photograph by Johnstone, O'Shannessy & Co., Melbourne. (Private collection).

Fig. 2. Clara Wehl, 1870. Photographer not known. (Private collection).

Fig. 3. Eduard Wehl, c. 1875. Photograph by J.J. Wyatt. (Private collection).

Materials and methods

Herbarium specimens associated with the Wehl family were located on online databases and via personal communication with herbarium staff (AVH 2020; Kew 2019). From these data, a master list was generated. Examination of specimens was undertaken in the herbaria of the Royal Botanic Gardens Kew by TWM and LTS, and the Royal Botanic Gardens Victoria by JLD and TWM. Original illustrations were examined by JLD, TWM and LTS and original correspondence associated with the Wehl family and Ferdinand Mueller were examined in the library of the Royal Botanic Gardens Victoria and others online at the Correspondence of Ferdinand von Mueller (by appointment with the editors). Photograph albums maintained by Wehl family descendants were generously made available for examination by JLD, TWM and SM. Current names for algae follow AANI (2020); fungi follow May & Wood (1997) and May *et al.* (2003), updated as necessary from cited references; and flowering plants follow APC (2020). Herbarium abbreviations follow Index Herbariorum (2019). Digitised newspapers were accessed at Trove (2019), and many literature sources were accessed via Biodiversity Heritage Library (2019). Type specimens of flowering plants were viewed at JSTOR Global Plants (JSTOR 2020).

The Wehl family and Baron Ferdinand von Mueller

> May all live long united in brotherly, sisterly love,
> The burden of life be lighted to all you whom I love.[4]

Baron Ferdinand von Mueller (1825–1896) was Australia's most significant botanist of the nineteenth century (Churchill *et al.* 1978; Muir 1979; Ross 1996; Orchard 1999). Having completed his doctoral studies in Germany, Dr Ferdinand Müller migrated to Australia in 1847 accompanied by his two surviving sisters Bertha Fredericka (aged 20) and Clara Christiana Marie (aged 14), arriving in Adelaide on the barque *Hermann von Beckerath* from Bremen via Rio de Janeiro on 15 December 1847 as unassisted cabin passengers (Ships List 2014).[5] As family custodian, Ferdinand had intended to remain in Australia only long enough to establish a new life for his sisters and then return to Germany (Home 1997). However, these intentions were soon reconsidered, firstly because of the potential for scientific investigation in Australia particularly in the field of botany, and secondly by the deteriorating political and social situation in northern Europe (McMullen 1997; Voigt & Sinkora 1996). Following arrival, the Müllers resided in Adelaide, and had a natural affinity with migrants of German origin and especially those with interests in science and natural history (Grandison 1990; Monteath 2011).

4 From an untitled and undated (post-Dec. 1875) poem by Clara Wehl referring to her family (Millicent Library).

5 *South Australian Register*, The "Beckerath," from Bremen, 18 Dec. 1847, p. 2.

Table 1. Wehl family biographies, including birth, death and marriage details, arranged in chronological order by birth. Primary source is McDonald, M.A. & McLachlan, K. (2011). *Descendants of Johann Jakob Wehl*. Unpublished.

Family of Eduard and Clara Wehl

Dr Johann Dietrich Eduard Wehl (5 June 1823, Celle, Prussia; 11 Feb. 1876, Mt Gambier), married Clara Christiana Marie Mueller (see following entry) 27 Oct. 1853, Richmond, Victoria. They had 15 children as listed below after the entry for Clara (Fig. 3).

Clara Christiana Marie Wehl (*née* Mueller) (14 Oct. 1833, Rostock, Germany; 31 July 1901, Millicent, SA), wife of Dr Eduard Wehl (see previous entry) (Fig. 2).

Bertha Otilie Harris (*née* Wehl) (31 July 1854, Mt Gambier; 1 Oct. 1922, Claremont, WA), married George Adolphus Harris (1849–1913) 30 May 1874, at Ehrenbreitstein, SA. They had five children.

Ferdinand Edward Wehl (9 Oct. 1855, Mt Gambier; 25 Feb. 1908, Millicent, SA), never married (Fig. 16).

Mathilde Louise Overheu (*née* Wehl) (6 May 1857, Mt Gambier; 4 Nov. 1944, West Perth, WA), married Heinrich Carl Friedrich (Fred) Overheu (1852–1937) 14 Aug. 1879, at Ehrenbreitstein, SA. They had nine children.

William (Bill) Mueller Wehl (6 Jan. 1859, Mt Gambier; 20 Oct. 1939, Perth, WA), married Selina (Lena) Henrietta Elizabeth Graham (1870–1960) 15 Sept. 1891, in Adelaide, SA. They had five children (Fig. 18).

Louise Theresa Matthiessen (*née* Wehl) (3 Oct. 1860, Mt Gambier; 17 Oct. 1952, Griffith, NSW), married John Francis Matthiessen 12 June 1889, at Ehrenbreitstein, SA. They had two children (Fig. 13).

Marie Magdalene Wehl (23 June 1862, Mt Gambier; 17 Aug. 1960, North Perth, WA), never married (Fig. 14).

Helene Pauline Wehl (*née* Wehl) (1 Feb. 1864, Mt Gambier; 4 May 1958, Brisbane, Qld), married her cousin Henry John Martin Wehl (see Other Wehl family below) 5 June 1895, at Surat, Qld. They had two children.

Albert George Wehl (8 Nov. 1865, Mt Gambier; 19 July 1958, Perth, WA), never married.

Wilfred Ludwig Wehl (5 Sep. 1867, Mt Gambier; 30 Dec. 1867, Mt Gambier), died as an infant.

Henrietta (Ettie or Ellie) Jane Sinclair (*née* Wehl) (18 Oct. 1868, Mt Gambier; 17 Aug. 1953, Rockhampton, Qld), married Donald Mack Sinclair 16 June 1891, at Millicent, SA. They had four children (Fig. 15).

Clara Bertha Wehl (3 Jan. 1870, Mt Gambier; 26 Feb. 1870, Mt Gambier), died as an infant.

James Henry Ferdinand (Fred) Wehl (29 Mar. 1871, Mt Gambier; 13 July 1964, South Perth, WA), never married (Fig. 17).

Clara Eleanor Wehl (7 July 1872, Mt Gambier; 15 Dec. 1872, Mt Gambier), died as an infant.

Arthur Reginald Wehl (9 Oct. 1873, Ehrenbreitstein; 19 Apr. 1942, South Perth, WA), never married.

Meta Agnes Stenhouse (*née* Wehl) (21 Dec. 1875, Ehrenbreitstein; 5 Mar. 1974, Adelaide, SA), married Andrew Stenhouse (1880–1971) 25 Sept. 1901, at Port Adelaide, SA. They had two children.

Other Wehl family

Henry John Martin Wehl (24 Oct. 1863, Mt Gambier; 4 July 1943, Clermont, Qld), husband of Helene Pauline Wehl (see her entry above), and cousin to the Wehl children. Son of Maxwell Wilhelm Wehl (1834–1874), brother of Eduard, and Julianna Paulina Wehl (*née* Straube) (1842–1918).

Marianne Louise Charlotte Amalie Wehl (19 Sept. 1867, Mt Gambier; 26 Oct. 1926, Melbourne), a flower painter who was concurrently active in South Australia and Victoria, and not to be confused with Marie Magdalene Wehl. She was one of six children of Karl Jakob Wilhelm Wehl (1830–1899) and Sophia Caroline Wehl (*née* Gorte) (1843–1920). Karl was a cousin of Dr Eduard Wehl. She never married.

Ferdinand was employed as a pharmacist at *Büttner & Heuzenroeder Apotheke* in Rundle St, Adelaide. He rented land at Bugle Range in 1848 from Samuel Davenport and built a cottage on it with the assistance of Friedrich Krichauff (Barker 2005; Gitsham 2013).[6] Ferdinand was naturalised as a British subject in August 1849 and anglicised his surname to Mueller (as did his sisters) so that he could legally purchase land in South Australia (Maroske 1996).[7] The land at Bugle Range was purchased by Mueller in 1850. After a brief and unsuccessful attempt at farming, he returned to Adelaide to continue working as a pharmacist. All the while, Mueller actively pursued his personal interests in botany by exploring and collecting botanical specimens in many areas of South Australia (Maiden 1907, 1908a; Hall 1978; Kraehenbuehl 1986; Womersley & Sinkora 1987; Orchard 1999; George 2009). He became active in publication of his botanical findings and much of his early taxonomic work is contained in journals or publications produced in Great Britain and Europe (e.g. Mueller 1853a; Müller & Hampe 1853; Miquel 1856). Clara actively took an interest in collecting botanical specimens and assisting her brother in the preparation of his collections (Gemmel 1975).

Mueller first visited the south-east of South Australia in October 1848 at the request of Samuel Davenport to investigate the possibility that poisonous plants were causing a wasting condition in sheep flocks called 'coast disease' (Cockburn 1927).[8] Mueller did not report any poisonous plants, and it was later discovered that the disease was caused by a deficiency of cobalt in the soil (McKay 1976). About 100 botanical specimens were collected by Mueller in the south-east (AVH 2020), and a small number of species were described by him or other taxonomists based on those collections (Bentham 1878; Reinbold 1897; Cooke 1995; Ross 1997; Barker *et al.* 1999; Cayzer *et al.* 2004).

Meanwhile, Dr Johann Dietrich Eduard Wehl arrived in Adelaide as a cabin passenger on *George Washington* on 2 March 1849, at the age of 25. Eduard was listed as a surgeon on the ship's manifest (Cummings 2017). By April 1849, Eduard was residing at Mt Gambier (SLSA 2014a), where he established the first medical practice for the area (Allen 1996a, 1996b). Eduard had received his medical degree from the University of Hanover (now Lower Saxony) and registered as a medical practitioner in South Australia on 2 October 1849 (Pearn 2001). Mt Gambier at that time was a hamlet of scattered buildings and slab houses, having

6 Known as 'von Mueller's Cottage', the hut is now a National Trust property, located on private property in Archer Hill Road, Bugle Ranges. The cottage measures 2.8 m × 4.8 m, and consists of a main room with a 1.5 m wide fire-place and a small bedroom. The cottage was built from sheoak (*Casuarina* sp.) and red gum. The trunks were split into slabs and arranged vertically to form the walls. The gaps were filled with pugging, a mixture of clay and water. The finish on the walls was a lime wash. The ceiling was of hand-sawn planks, the roof was originally thatched with bark, and the floor was gum planks butted together.

7 *South Australian Register*, Naturalization of aliens, 18 Aug. 1849, p. 3.

8 *The Advertiser*, South-eastern drainage works, 1 Dec. 1902, p. 7.

Fig. 4. Dr. Wehl's residence, Mt Gambier, no date. Photographer not known. (Private collection).

been opened to freehold land sales in 1847. The larger buildings included a public house, a store and a blacksmith set on a grid of a few streets and was provisionally known as 'Gambierton'. Eduard resided in Mt Gambier until 1852, after which he travelled to the Victorian goldfields and Melbourne. Eduard appears to have developed a friendship with Mueller whilst both were in Adelaide and they planned to jointly establish a medical practice and pharmacy at the goldfields.[9] However, that venture never eventuated, with Eduard soon returning to Mt Gambier and Mueller establishing himself in Melbourne.[10]

In early 1853, Mueller commenced his appointment as government botanist for the Colony of Victoria (Home 2012). He resided in a cottage in the Melbourne Botanic Gardens and Clara and Bertha also moved to Melbourne to be with him. They stayed for about six months at the cottage (now the Plant Craft Cottage). Eduard was in Victoria at this time and he was in the Castlemaine goldfields in December 1852 as Mueller visited him at Campbell's Creek (Home 2012). Eduard and Clara married on 27 October 1853, at Richmond, Victoria, and soon after moved to Mt Gambier where Eduard re-established his medical practice (Allen 1996b). At the time of their marriage Eduard was 30 years old and Clara 20. The settler population in the south-east of South Australia was about 600 at this time, and apart from a few coastal villages, the population was widely scattered across pastoral and agricultural properties (Linn 2013).

In Mt Gambier, Eduard supplemented his medical practice with other enterprises as 'doctoring' did not pay well enough (Allen 1996b). He built the first flour mill in the district in 1857, and began small-scale farming in 1858. By 1863, the mill had been converted to steam power and traded under the name *Victoria Steam Flour Mills*.[11] In keeping with Eduard's social standing as the most prominent doctor in the area and an enterprising businessman, he built a large two-storied dormer window house in 1866 (Fig. 4), close to the flour mill. This was among the first buildings to use Mt Gambier limestone in its construction and as an architectural device (Linn 2013). For some time, it was among the most substantial private dwellings in the district. As well as the family residence, it functioned as Eduard's surgery and dispensary. This house still stands at 2 Wehl Street South, and retains the original structure with a few additions. It currently functions as a private residence, but had formerly been used as a school and a boarding house.

Eduard became a prominent civic figure, involved with many clubs, lodges and the Lutheran Church (Lewis 2010). He donated the land for, and laid the foundation stone of, St Martins Church in January 1862.[12] He was elected chairman of the first District Council of Mt Gambier, 16 June 1863.[13] From about 1865 he presided as a magistrate and justice of the peace over hearings in the Local Court of Mt Gambier, and acted as coroner and undertaker.[14] He was president of the Horticulture and Floriculture Society at this time, and experimented with new crops trialling fodder plants, pasture grasses and flax on his farms in the area.[15] At the Intercolonial Exhibition of Australasia in Melbourne in 1867, Eduard received a medal for his display of flax.[16] Examples of his flax are held in the Museum Victoria collection (Rebecca Carland, Museum Victoria, pers. comm.).

9 *South Australian Register*, An old friend of the Baron, 12 Oct. 1896, p. 7.

10 E. Wehl to F. Mueller, 2 Aug. 1852; E. Wehl to F. Mueller, 20 Jan. 1853 (Mueller Correspondence, RBGV).

11 *Border Watch*, Victoria steam flour mills, 30 Oct. 1863, p. 3.

12 *Border Watch*, History of St. Martin's Church, 15 Oct. 1932, p. 5.

13 *Adelaide Observer*, Mount Gambier, 20 June 1863, p. 8.

14 *South Australian Register*, Mount Gambier, 5 Apr. 1861, p. 3.

15 *South Australian Register*, Port Macdonnell, 23 Aug. 1867, p. 4. *South Australian Chronicle and Weekly Mail*, The South-eastern District, 1 May 1869, p. 4.

16 *South Australian Advertiser*, The Victorian exhibition, 19 Feb. 1867, p. 3.

Fig. 5. *Ehrenbreitstein*, by Marie Wehl, May 1890. (Private collection).

Eduard's farming enterprises as well as the flour-mill proved to be financially unsuccessful, and it was necessary to sell some of his farming properties in 1868 and the flour mill in 1869.[17] The Mt Gambier house was put up for sale in 1871, as were the blocks of land owned by him within the town precinct. In 1872, his estate was assigned to trustees and a notice was filed in the Court of Insolvency.[18] Around this time, land was opened for selection at Mayurra, south of Millicent (Millicent was surveyed in 1871 and soon took on the role of centre of the district) (Linn 2013). Eduard took up a tract of 'drainage land' of about 260 hectares overlooking Lake Bonney to the south, and Wyrie Swamp and Millicent to the north (Environment Protection Authority 2020). The low-lying portions of the property were formerly a large swamp, but excavations and cuttings made in 1868 allowed for drainage into Lake Bonney (Talbot 1921; Paull 1942).[19] He named the property *Ehrenbreitstein* in remembrance of the castle of the same name in Germany (Fig. 5) (Melano 1973; Maroske & Dowe 2015). He at first attempted to grow wheat but soon changed to grazing sheep. He maintained his medical practice in Mt Gambier but on a reduced capacity, and in May 1873 was listed as a public vaccinator.[20] Despite this, a replacement doctor had succeeded him as of August 1873. The house in Mt Gambier was sold to a group of trustees who converted it for use as the Mt Gambier Grammar School that opened on 21 July 1873, but closed in December 1877 when a government school was established nearby.[21] Eduard and Clara's eldest sons, Ferdinand Edward and William Mueller were enrolled as pupils at the Grammar School. Eduard moved the family to *Ehrenbreitstein* in about August 1873, and later moved there himself in late 1873. Eduard began to show signs of illness in 1874, and finally succumbed to hydatid disease[22] and died on 11 February 1876.[23] The family is commemorated in the names of some Mt Gambier streets, including Wehl, Bertha, Edward, George and William Streets, as well as the suburb of Claraville (though this name is no longer used) (see Table 1) (SLSA 2014b).[24]

The death of Eduard in 1876 left Clara and the family in a precarious and vulnerable position. There were eight children under the age of 14, with the youngest, Meta Agnes, not quite three months old. Of the other daughters, Bertha Otilie (who married in 1874) was

17 *South Australian Chronicle and Weekly Mail*, South-eastern District, 23 May 1868, p. 4.

18 *South Australian Chronicle and Weekly Mail*, In the assigned estate of Johann Dietrich Edward Wehl, 20 Jan. 1872, p. 1.

19 *The Advertiser*, South-eastern drainage works, 1 Dec. 1902, p. 7.

20 *Border Watch*, Vaccination notice, 14 June 1873, p. 3.

21 *Border Watch*, Fifty years ago, 29 Apr. 1914, p. 2. *Border Watch*, Historic building offered at auction, 11 Feb. 1943, p. 3.

22 Hydatid disease is a condition caused by cysts containing the larval stages of the dog tapeworm infesting the lungs and other organs. The mix of swampy paddocks, sheep and dogs in the south-east of South Australia provided ideal conditions for the disease.

23 *Border Watch*, Death of Dr. Wehl, 12 Feb. 1876, p. 2.

24 Claraville was not an officially gazetted name, but one that was proposed by Dr Eduard Wehl to honour Clara Wehl. The name was locally applied to the few streets around the Wehl's flour mill. In survey maps it was incorrectly written as Clareville.

23 years, Mathilde Louise 18 years, Louise Theresa 15 years, Marie Magdalene 13 years, Helene Pauline 12 years and Henrietta Jane 7 years. The sons were Ferdinand Edward, aged 21 years, William Mueller 17 years, George Albert 11 years, James Henry Ferdinand 5 years and Arthur Reginald 3 years. Three children, Wilfred Ludurz (born 1867), Clara Bertha (1870) and Clara Eleanor (1872), had died in infancy. Mueller visited Clara to attend Eduard's funeral in February 1876 (Kraehenbuehl 1983), and following this spent a number of days with her to assist with Eduard's will and provide guidance where he could as to the family's future (Churchill *et al.* 1978). Mueller was to maintain his personal and financial support for the family, and some provisions were provided in his own will that proceeds of investments and other earnings be given to his one remaining sister, Clara, and the families of both sisters.[25] As he never married, Mueller remained close to his immediate family, and, although based in Melbourne, maintained contact through regular correspondence, very little of which has survived.

Schooling

> When writing to your dear mother, tell her to let me know, when the quarter's payment for Ellie's schooling is due again, so that I may send the sum, (I think it is £12.10/-) timely.[26]

The schooling that the children received remains mostly unknown. Ferdinand Edward was enrolled at Francis Denovan's National School in 1867, at age 12.[27] Ferdinand Edward and William Mueller were reported to have attended Mt Gambier Grammar School run by the Reverend Mr Houghton. Henrietta was reported to be a pupil at Miss Jacob's School in Mt Gambier (DAAO 2019); this may refer to Winnold House, the school established by Mrs Mary Jacob, and at which her daughter Miss Caroline Jacob taught 1877–1879. The school was also known as the Ladies' School. In correspondence between Louise and Mueller, there is mention of Ellie's (Henrietta's) school fees, which Mueller intended to pay.[28] When the family moved to *Ehrenbreitstein* some children attended the nearby Pompoon Swamp School: James Henry Ferdinand was first enrolled at the school in October 1877, Arthur Reginald in January 1878, and Meta Agnes on 15 January 1884.[29] James Henry Ferdinand is recorded as having left Pompoon Swamp School in 1885, at the age of 14 (Paull 1942; Richards 1974). Henrietta trained as an obstetrics nurse in the late 1890s and later enrolled in the Brisbane Central Technical College in 1930 to study ceramics and pottery (DAAO 2019). Meta trained as a nurse in Adelaide during the 1890s.[30] All the sons became pastoralists or farmers, leaving South Australia and acquiring properties in Queensland and/or Western Australia, states where most descendants presently reside.

The Wehl family botanical collections

> The second parcel of dried plants, dear niece Louise, sent by you, reached me a few days ago. I had only this evening a little leisure to examine them; a few are interesting for locality, and all the specimens well dried.[31]

The botanical activities of the Wehl family occurred within the context of the circumstances that existed in the Colony of South Australia at the time of their arrival in 1847 and progressively through a fifty-year period to the late 1890s. It has been noted that German migrants living in South Australia during those times often saw "collecting plants as an absorbing interest or useful pursuit" (Monteath 2011). Underlining the Wehl's collecting activities was the familial connection to Ferdinand Mueller, to whom they were lovingly devoted and reciprocally supportive. The Wehl family became a reliable part of the network of botanical collectors that Mueller established,[32] and their support continued up to his death in 1896.[33]

Mueller developed and maintained, through patronage and voluminous correspondence, a large network of collaborators and plant collectors throughout the Australian colonies (Carr 1981; Finney 1993; Darragh 1996; Home *et al.* 1998, 2006; Lydon 2002; Clarke 2008). It is estimated that he personally associated with about 1400 collectors, with about 225 of them being women and girls (Maroske 2014). To facilitate and encourage local amateurs to collect plants in remote locations in the Australian colonies, Mueller 'advertised' for assistance and his requests were promoted widely in newspapers.[34]

25 Ferdinand Mueller's Will, 8 Nov. 1896 [photocopy] (Millicent Library).

26 F. Mueller to Louise Wehl, 29 Sep. 1884 (Mueller Correspondence, RBGV).

27 *Border Watch*, Local intelligence, 25 Dec. 1867, p. 2.

28 F. Mueller to Louise Wehl, 29 Sep. 1884 (Mueller Correspondence, RBGV).

29 Admission Register (n.d.). Pompoon Swamp School. Unpublished: Millicent Library.

30 Clara Wehl to Louise Matthiessen 21 Dec. 1900 (Mueller Correspondence, RBGV).

31 F. Mueller to Louise Wehl, 30 Oct. 1882 (Mueller Correspondence, RBGV).

32 F. Mueller to Louise Wehl, 29 Sep.1884 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 25 Oct. 1887 (Mueller Correspondence, RBGV).

33 F. Mueller to Louise Matthiessen (*née* Wehl), 2 July 1896 (Mueller Correspondence, RBGV).

34 *The Herald*, Preserved dried flowers and seaweed, 14 May 1870, p. 3. *The Inquirer and Commercial News*, Preserved dried flowers and seaweed, 11 May 1870, p. 3. *Western Mail*, The flora of Western Australia, 6 July 1889, p. 10.

In his role as a pioneering doctor based in Mt Gambier, Eduard Wehl travelled widely throughout the south-east of South Australia and it is during these excursions that he first collected plant specimens for Mueller. Clara, once settled in marriage and commencing a family, took an interest in marine plants and was very active in collecting algae in the Port Macdonnell and Rivoli Bay areas. Of all the Wehl children, Mueller probably had the most regular correspondence with his niece, Louise Theresa Wehl, who was also the most productive plant collector of the children (see below).

Apart from Eduard who was a trained medical practitioner, neither Clara nor any of the children were formally trained in botany or science. At that time, the involvement of women in professional botanical activities was limited because of social and educational restrictions (Maroske 1993; Moyal 1993a, 1993b; Jordan 2005). However, domestically based activities such as flower collecting and painting were encouraged as healthy and interesting pursuits for girls and women (Norton 2009; Orr 2011). For the Wehls, botanising was a family activity and an interest that was undertaken during the general flow of their daily routine. As garnered from the species lists of their collections, the plants and fungi that were collected and illustrated were species that would have been growing in the immediate neighbourhood of Mt Gambier and Lake Bonney. Following Eduard's death in 1876, Mueller paid for some of the specimens that were collected by Clara and her daughters as a means of financial assistance.[35]

Collection methodology

> The circulars, enclosed herewith, you might send to friends further inland, such as would be willing to dry plants there, especially on places where no one collected yet. Any little plants growing on moist mud or floating in lagoons might be particularly rare. Pray do not send any plants, on which there is neither flower or fruit. Mosses and lichens do not occur much in your northern locality; but whatever does occur, would be from thence of particular interest.[36]

To assist and direct his collectors, Mueller produced a set of instructions that he had printed and widely distributed as a *Circular* to potentially interested persons (Mueller 1876a).[37] The collection choices made by the Wehls, as well as drying and preservation techniques were based on the *Circular*, although Clara would have had experience of collecting with Mueller before her marriage. Mueller also suggested which kinds of plants to collect.[38] He often emphasised that "small plants should be gathered with their roots", and the inclusion of the root system is a feature of many of the Wehls' herbarium specimens and also the illustrations.

For a given species, comparison of the sisters' illustrations and the herbarium specimens in MEL, collected by the Wehl family members, indicates that many specimens were the actual subjects that were illustrated (Figs 6–12). Following completion of the illustrations, the specimens were pressed and dried, then dispatched to Mueller in Melbourne where he incorporated them into his herbarium. Apart from the physical similarity between specimens and illustrations, chronological data on both corroborate the connection for many of them. Although there is no direct evidence or surviving correspondence, it seems likely that Mueller provided identification of the plants that were illustrated by identifying the specimens with which they were associated. In addition, there are a series of illustrations where the same specimens were illustrated in individual sketchbooks, thus suggesting that the sisters illustrated the same specimen at the same time, but from different aspects (i.e. different sides of the table).

Some insight is provided into the manner in which fungi were collected and illustrated in a letter from Marie's youngest sister Meta to Margaret Willis in 1942, writing that

> one year he [Mueller] wanted Fungus, so my brother Arthur and I who were just school children at the time, hunted all the valleys for Fungus, and as we brought them home my sister Marie would sketch and paint them, first whole and then in halves, and then dry the specimen which would be sent on to our Uncle with the paintings; we found over sixty different kinds.[39]

Collections and specimens

About 1200 specimens of algae, plants and fungi can be attributed to the Wehl family and have been located in 17 herbaria.[40] Most specimens are held in the National Herbarium of Victoria (MEL). Information for each plant specimen held in Australian herbaria

35 F. Mueller to Louise Wehl, 10 Oct. 1882 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 30 Oct. 1882 (Mueller Correspondence, RBGV).

36 F. Mueller to Louise Wehl, 30 Oct. 1882 (Mueller Correspondence, RBGV).

37 Full text of the Circular is available at: https://trove.nla.gov.au/newspaper/article/2982440.

38 F. Mueller to Louise Wehl, 30 Oct. 1882 (Mueller Correspondence, RBGV).

39 Meta Stenhouse to Margaret Willis, 9 Sep. 1942 (Mueller Correspondence, RBGV).

40 AD – State Herbarium of South Australia, Adelaide, Australia; AK – Herbarium, Auckland War Memorial Museum, New Zealand; BM – [British Museum] Natural History Museum, London, UK; BRI – Queensland Herbarium, Brisbane, Australia; CAVA – University of California at Berkeley, Carmel Valley, California, USA; DNA – Northern Territory Herbarium, Darwin, Australia; F – Field Museum of Natural History, Chicago, USA; K – Herbarium, Royal Botanic Gardens Kew, UK; K(M) – Mycology herbarium, Royal Botanic Gardens Kew, UK; LD – Lund University, Sweden; MEL – National Herbarium of Victoria, Melbourne, Australia; MELU – University of Melbourne Herbarium, Carlton, Australia; NSW – National Herbarium of New South Wales, Sydney, Australia; NY – New York Botanical Garden, Bronx, USA; P – Herbier Muséum national d'Histoire naturelle, Paris, France; PERTH – Western Australian Herbarium, Perth, Australia; S – Swedish Museum of Natural History, Stockholm, Sweden.

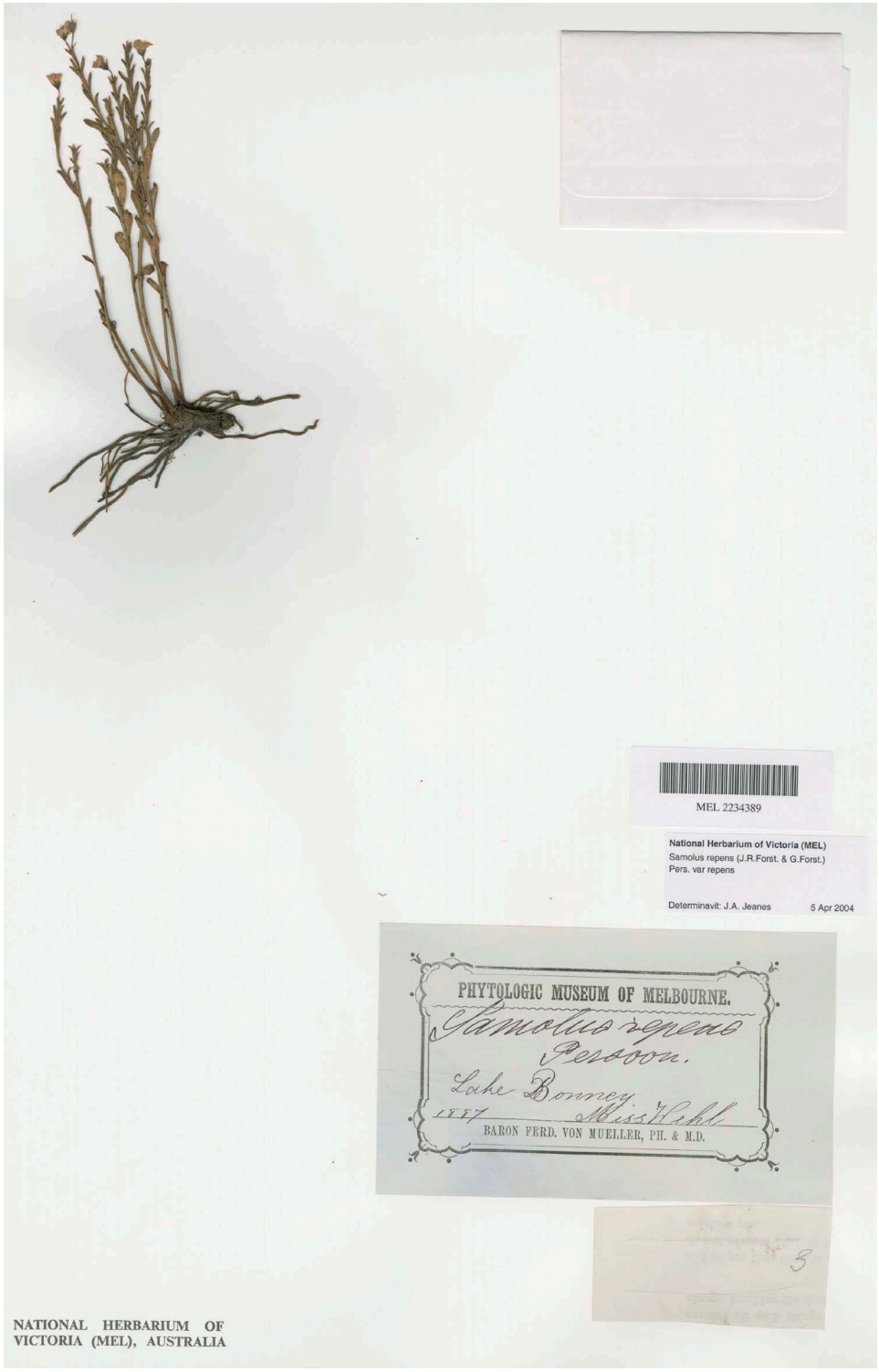

Fig. 6. Specimen of *Samolus repens* (J.R.Forst. & G.Forst.) Pers., South Australia. Lake Bonney, 1887, *Miss Wehl 3*; MEL2234389. Reproduced with permission of the Royal Botanic Gardens Victoria. See Figs 7 and 8 for the illustrations related to this specimen.

can be obtained by visiting The Australasian Virtual Herbarium website (AVH 2020). Summaries of the collections made by those family members who collected specimens are presented below. Biographical details of the whole family are presented in Table 1. Please note that initials and dates used on herbarium labels are frequently indistinct, and some records (such as AVH) are unreliable in recording the individual collector. The collector labelling presented here is based on personal examination by the authors and may differ to other interpretations.

Clara Christiana Marie Wehl (*née* Mueller) (Fig. 2) was the most prolific collector in the family, with about 480 specimens attributed to her. These mainly consist of herbs and shrubs from the Mt Gambier and Lake Bonney areas,[41] but also a significant collection of about 180 marine algae mainly from Macdonnell Bay and

41 F. Mueller to O. Tepper, 13 Mar. 1882 (Mueller Correspondence, RBGV).

Fig. 7. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** - *Apium prostratum* Labill. ex Vent., 'March'; **Right** - *Samolus repens* (J.R.Forst. & G.Forst.) Pers., 'March'. Reproduced with permission of the Royal Botanic Gardens Victoria. See Fig. 6 for the specimen of *Samolus repens* that is the subject of this illustration.

Fig. 8. Illustrations by Henrietta Wehl in the *Plain-cover Sketchbook*. **Left** - *Helichrysum luteoalbum* (L.) Rchb.; **Right** - *Samolus repens* (J.R.Forst. & G.Forst.) Pers., 'March'. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia). See Fig. 6 for the specimen related to this illustration.

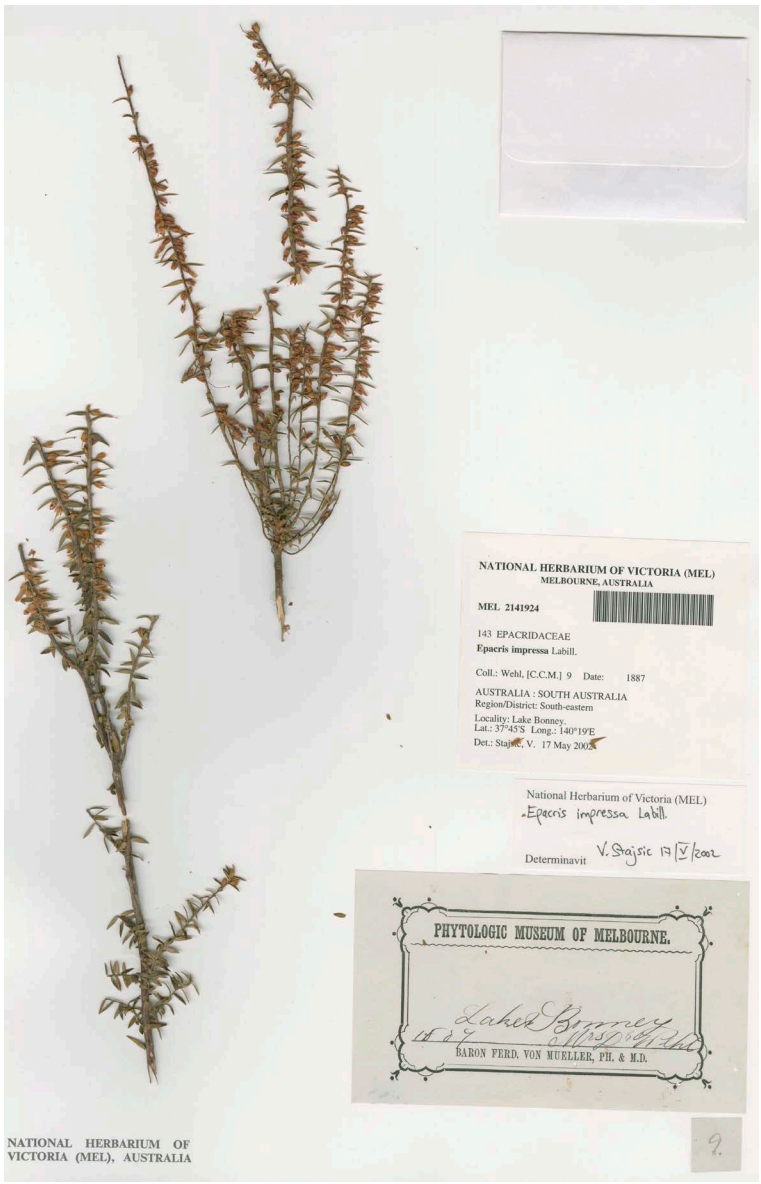

Fig. 9. Specimen of *Epacris impressa* Labill. South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 9*; MEL2141924. Reproduced with permission of the Royal Botanic Gardens Victoria. See Fig. 10 for the illustrations related to this specimen.

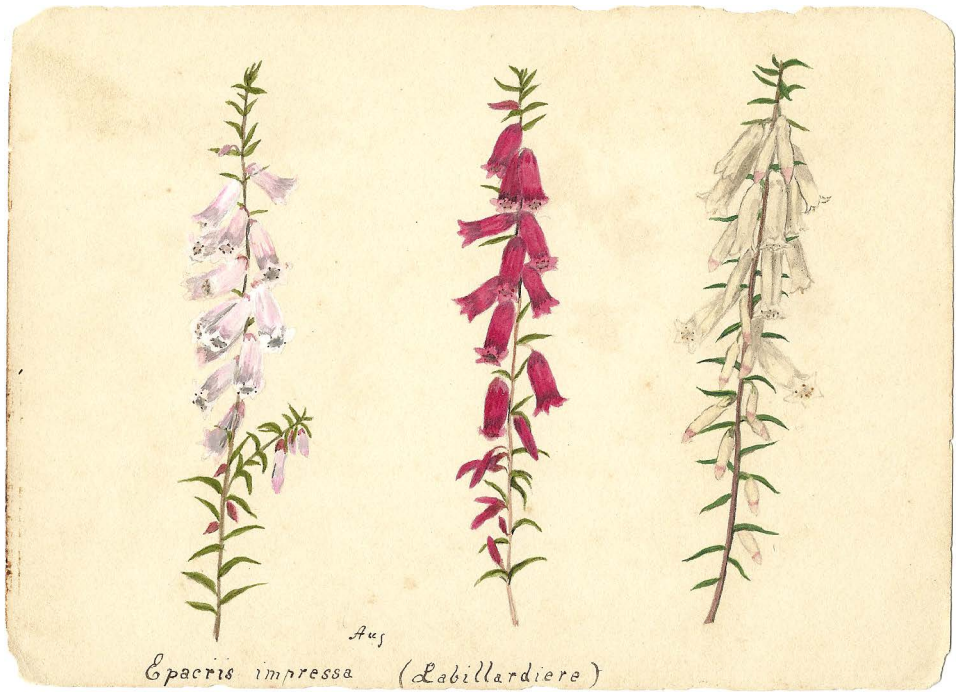

Fig. 10. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. Three colour forms of *Epacris impressa* Labill., 'Aug'. Reproduced with permission of the Royal Botanic Gardens Victoria. See Fig. 9 for the specimen related to this illustration.

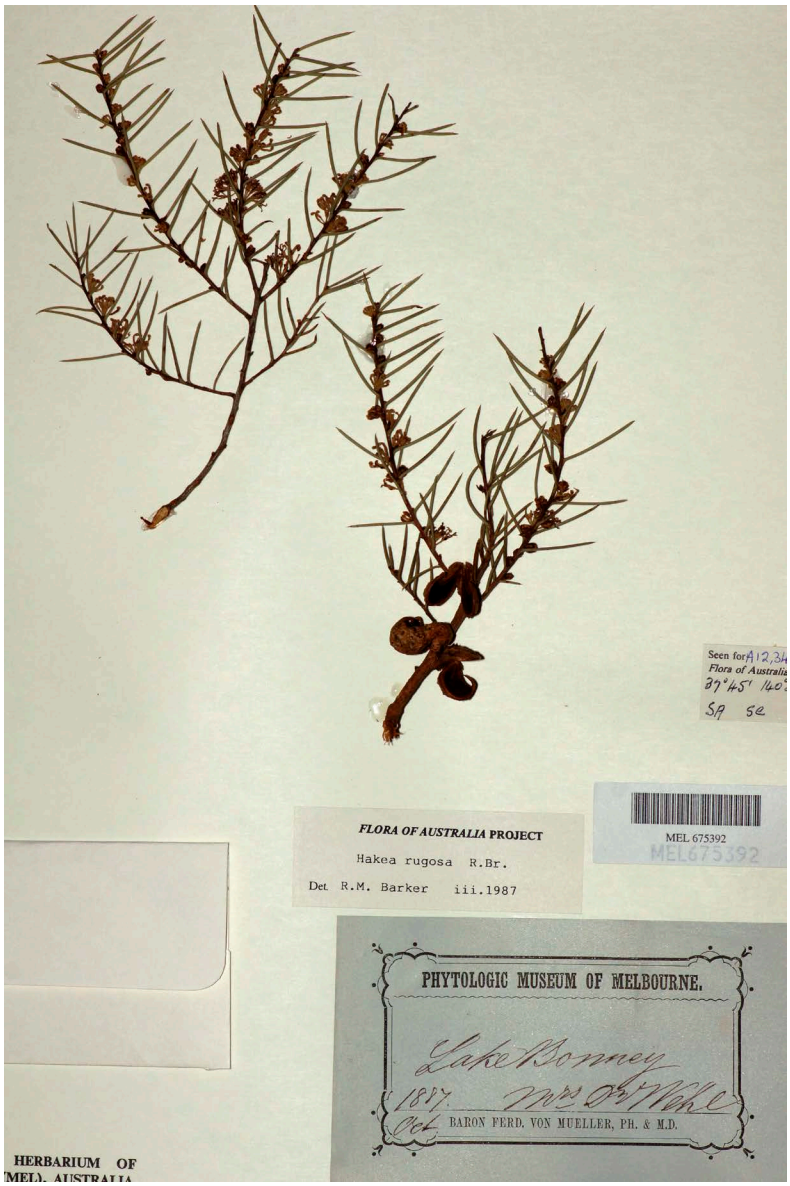

Fig. 11. Specimen of *Hakea rugosa* R.Br., Lake Bonney, Oct. 1887, *Mrs Dr Wehl s.n.*, MEL0675392. Reproduced with permission of the Royal Botanic Gardens Victoria. See Fig. 12 for the illustration related to this specimen.

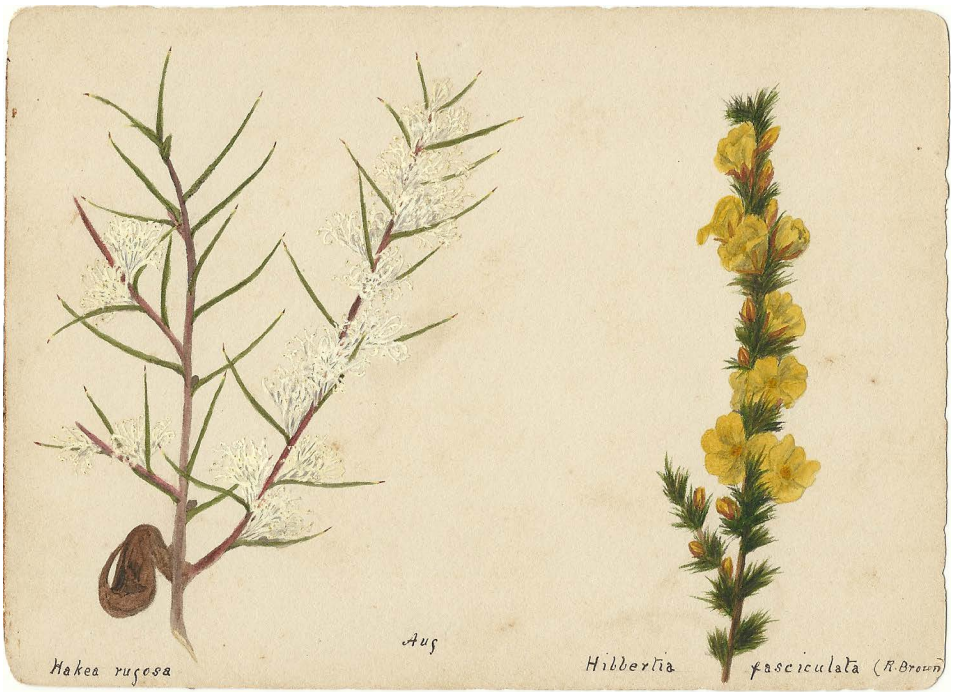

Fig. 12. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** - *Hakea rugosa* R.Br., 'Aug.'; **Right** - *Hibbertia fasciculata* R.Br. ex DC. Reproduced with permission of the Royal Botanic Gardens Victoria. See Fig. 11 for the specimen related to the illustration of *H. rugosa*.

Fig. 13. Louise Theresa Wehl, 1874. Photograph by H. Norman. (Private collection).

Fig. 14. Marie Magdalene Wehl, Dec. 1886. Photograph by George Watson. (Private collection).

Fig. 15. Henrietta Jane Wehl, 1888. Photograph by G. Watson. (Private collection).

Rivoli Bay. In a rare surviving letter, Clara indicated that she kept Mueller up-to-date with her collecting activities. She wrote that "I was recently at the Bay with Eduard and have brought back a few algae, which I am now drying for you",[42] and "I shall send you a small box with algae soon. Eduard told me it would be sufficient to just dry them not spread out, so it won't take up so much of my time".[43] Significant numbers of Clara's algae collections were subsequently sent by Mueller to William Harvey at Trinity College, Dublin, Ireland, and to Jacob Agardh at Lund, Sweden,[44] both of whom responded with lists of identifications (see below in Algae section). Clara's active years were 1848–1894. She collected at Mt Barker and Barossa under her maiden name of C. Mueller in 1848 (five specimens in MEL), and probably in the company of Mueller as some labels are in Latin (AVH 2020). She collected elsewhere in South Australia at Bordertown, Broughton River, Clare Village, Guichen Bay, Heathfield (?near Adelaide), Lake Bonney, Mt Burr, Mt Gambier, Naracoorte, Penola and Spencers Gulf; and in Victoria at Port Phillip Heads. Her specimens are mostly at MEL, with others known to be housed at P, AK, LD and MELU. On her specimen labels she is recorded as C. Mueller, Clara Wehl, C.C.M. Wehl, Mrs C.C.M. Wehl, Mrs E. Wehl, Mrs Wehl or Mrs Dr Wehl.

Louise Theresa Wehl [later married as Louise Matthiessen] (Fig. 13) was the next most active collector in the family with about 220 specimens attributed to her. They were mainly herbs and shrubs with most (about 190 specimens) being gathered from the mid-north region of South Australia when she was Postmistress at Appila-Yarrowie 1882–1884 and later in Western Australia under her married name. Of all the Wehl children, Louise appears to have been the closest to Mueller, as a significant amount of somewhat personal though avuncular correspondence was shared between them, including letters relating to Louise's botanical collections.[45] Louise collected in South Australia at Appila Creek (Cross 2002), Broughton River, Clare Village, Gladstone, Lake Bonney, Mt Gambier, Murray River, Spencers Gulf, St Vincent Gulf and Yarrowie; in Western Australia at Esperance; and in New South Wales at Barrier Range [Broken Hill]. Most specimens are at MEL, and one each at BRI and MELU. She is recorded on specimen labels under her maiden name as Miss L. Wehl, Louisa Wehl, Louise Wehl, L. Wehl, L.T. Wehl, Miss Wehl and later under her married name after 1889, as L. Matthiessen or L. Mathieson, under which she collected about six specimens all dated as 1896 and from Western Australia.

Dr Johann Dietrich Eduard Wehl (Fig. 3) collected about 75 specimens, mainly herbs and shrubs, but also a few trees in the south-east of South Australia at Biscuit Range [there is a Biscuit Flat north of Millicent], Lake Bonney, Lake Hawdon, Mooroogoopoo [unidentifiable

42 Clara Wehl to F. Mueller, 11 June 1863 (Mueller Correspondence, RBGV).

43 Clara Wehl to F. Mueller, 29 Aug. 1866 (Mueller Correspondence, RBGV).

44 F. Mueller to J. Agardh, 26 Aug. 1885 (Mueller Correspondence, RBGV).

45 F. Mueller to Louise Wehl, 10 Sep. 1884 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 29 Sep. 1884 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 10 Oct. 1882 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 15 Oct. 1887 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 30 Oct. 1882 (Mueller Correspondence, RBGV).

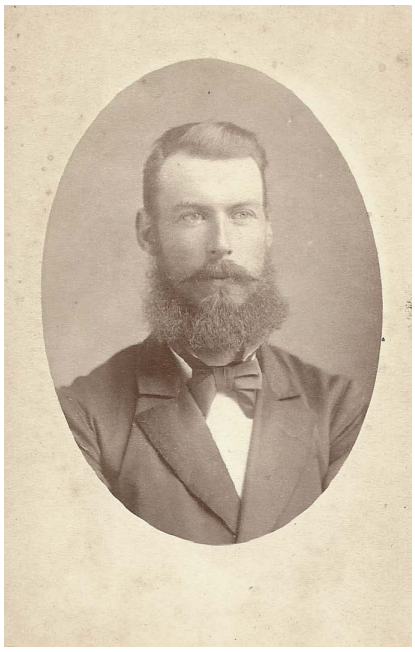

Fig. 16. Ferdinand Edward Wehl, undated. Photographer not known. (Private collection).

Fig. 17. James Henry Wehl, undated. Photograph by Hammer & Co. (Private collection).

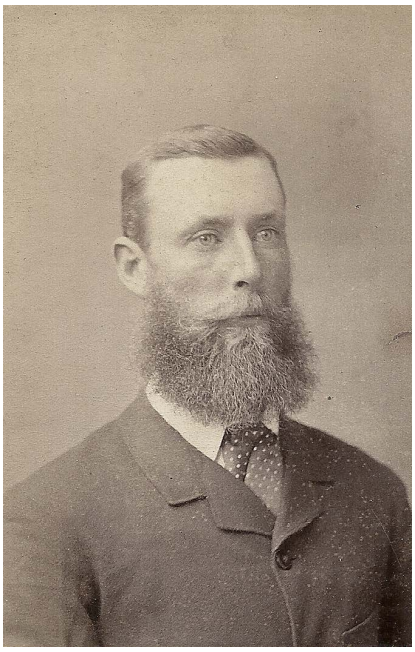

Fig. 18. William Mueller Wehl, undated. Carte-de-visite by F.C. Burman, Melbourne. (Private collection).

place], Mt Gambier, Mt Tilley, Reedy Creek (near Kingston) and Yallum (near Penola); in Victoria at Bendigo, Mt Emu and Mt Sturgeon; and in New South Wales at Barrier Range [Broken Hill]. He is recorded on specimen labels as E. Wehl, E.F. Wehl, E.F.D Wehl, or Dr Wehl. Eduard maintained a small private museum at Mt Gambier, had an interest in coins and medals and sent specimens of flax, birds and animals to the Adelaide and Melbourne museums (Monteath 2011; Rebecca Carland, Museum Victoria, pers. comm.).

Marie Magdalene Wehl (Fig. 14) collected about 70 specimens, mainly from Broughton River, Lake Bonney and Mt Gambier. She mainly collected fungi (c. 65) during 1886–1887, when she was about 24 years old, and those specimens are at K(M) (c. 15) and MEL (c. 50) (May & Pascoe 1996). She is recorded on specimen labels as Miss Wehl, Miss M. Wehl, Miss Marie Wehl, Miss Mary Wehl, M. Wehl and M.M. Wehl. In a technical sense, Marie was not the actual collector of some fungal specimens attributed to her since it was noted that her youngest siblings, Arthur Reginald and Meta Agnes brought home fungi for Marie to illustrate,[46] although during Marie's most productive years as an illustrator they were only 15 and 13 years old, respectively. As there are no specifics available, such specimens are here designated as Marie Wehl collections.

Henrietta (Ettie or Ellie) **Jane Wehl** [after marriage as Henrietta Sinclair] (Fig. 15) collected about 45 specimens in South Australia at Lake Bonney, all being plants, mostly herbs/shrubs. She is recorded on specimen labels as Miss Wehl, E. Wehl, Ellie [sic.] Wehl, Ettie Wehl or H. Wehl.

Ferdinand Edward Wehl (Fig. 16) collected about 65 specimens in South Australia at Lake Bonney and in New South Wales at Barrier Range [Broken Hill],[47] all plants, mostly herbs/shrubs and a few trees. He is recorded on specimen labels as F. Wehl and F.E. Wehl.

James Henry Ferdinand (Fred) **Wehl** (Fig. 17) collected about 20 specimens, mainly herbs and shrubs in Western Australia in the Coolgardie and Kalgoorlie areas. He is recorded on specimen labels as Ferd. Wehl and F. Wehl. Note that James Henry Ferdinand (Fred) Wehl may be confused with Ferdinand Edward who was also cited on specimens as F. Wehl, but Ferdinand Edward appears never to have visited Western Australia.

William (Bill) **Mueller Wehl** (Fig. 18) collected about 10 specimens, all herbs/shrubs in Victoria at Glenelg River; in South Australia at Mt Burr and Mt Gambier; and in Queensland at Surat.[48] He is recorded on specimen labels as W. Wehl and Wilh. Wehl.

Henry John Martin Wehl [husband of Helene Pauline Wehl] collected about 50 specimens of herbs, grasses and shrubs (also one fungus) in South Australia at Lake Bonney, Murray River, and St Vincent Gulf; in New South Wales at Barrier Range [Broken Hill]; and in Queensland at Balonne River, Maranoa and Surat. He is recorded on specimen labels as H.J.M. Wehl, H. Wehl and Henry Wehl. He was cited by Mueller

46 Meta Stenhouse to Margaret Willis, 9 Sep. 1942 (Mueller Correspondence, RBGV).

47 Ferdinand Wehl to F. Mueller, 27 Feb. 1886 (Mueller Correspondence, RBGV).

48 F. Mueller to Ralph Tate, 25 Dec. 1880 (Mueller Correspondence, RBGV).

(1895) in relation to the experimental cultivation of the legume crops *Dolichos biflorus* and *Phaseolus radiatus* in northern New South Wales.

Wehl specimens involved in typification

Only a small number of specimens collected by the Wehls were involved in typifying the names of new taxa and those associated with typification are listed in Table 2 with publication details, specimen data and current name. These include two marine algae collected by Clara Wehl (specimens in MEL), 17 species of fungi mainly described by Mordecai Cooke and George Massee based on collections from Lake Bonney by Marie Wehl (types mostly held at K(M)) (see below for more on Cooke and Massee's work), and four taxa of flowering plants of which three were described by Mueller and one by Herbert Bennett Williamson (all with syntypes in MEL).

Citation of Wehl specimens in taxonomic works

Citations of Wehl specimens were included in many taxonomic works. Those specimens involving typification are discussed above (see Table 2), whilst others were cited in a broad range of publications. We have located Wehl citations utilising digital, data and visual searches. We record the publication, the original citation and the currently used name. This information is included in the tables associated with the following sections, under the three groups of life forms that were collected by the Wehls: algae, plants and fungi.

Algae

Clara Wehl's algae specimens were mainly cited in *Phycologia Australica*, a work on southern Australian marine algae by Irish phycologist William Henry Harvey (1811–1866). Harvey commenced writing *Phycologia Australica* in 1858 and it was to be limited to 300 illustrated plates, describing 800 species and to illustrate at least one species of each recognised genus. In the preface to volume 5, Harvey acknowledges people who had collected, or at least facilitated the sending of specimens to him. These included George Clifton of Fremantle, Ferdinand Mueller, Henry Watts of Warnamboul (sic.), Mrs Barker of Cape Shank, amongst others, but no Wehls. The prologue to volume 5 is dated 1 September 1863.

In volume 5 under the heading 'Synoptic Catalogue of Australian and Tasmanian Algae', those specimens collected by "Mrs Wehl" were cited (Table 3). From this it is evident that, when more than one specimen was cited for a species, Mrs Wehl was always the last to be mentioned, and at least sometimes out of a general geographical sequence. For example:

> 334. [Wrangelia] crassa, Hook.f. and Harv. …. HAB. Western Australia, G. Clifton. South Australia, Dr. Curdie. Warnamboul, H. Watts. Georgetown, Tasmania, R. Gunn, W.H.H. M'Donnell Bay, Mrs. Wehl.
> 408. [Phacelocarpus] complanatus, Harv. … HAB. South Australia, Dr. Curdie ! Port Fairy, W.H.H. Warnamboul, H. Watts ! South Port, Tasmania, C. Stuart. M'Donnell Bay, Mrs. Wehl.
> 682. [Callithamnion] Griffithsioides, Harv., … HAB. Wilson's Promontory, Dr. Mueller. Port Fairy, W.H.H. Georgetown, Tasmania, R. Gunn!. M'Donnell Bay, Mrs. Wehl!

Phycologia Australica was Harvey's last major publication, and even as early as 1860 he was clearly looking forward to finishing it (Ducker 1988, p. 333), and by 1863 he was apparently in poor health (Ducker 1988, p. 15). The accessions book for the University of Dublin Herbarium at Trinity College (TCD) (Harvey s. dat.), where Harvey was based, records that 71 specimens were received in 1863 from Mueller and were all marked as "Australian Algae, from McDonnell Bay – Mrs Wehl" (Table 4). These were received in two batches, one of 48 specimens and the second of 23 specimens, and accounted for 67 species. Although the specimens were sent in two batches, all were recorded on a single page of the TCD accessions book. The fact that only 13 of the 71 specimens were cited in *Phycologia Australica* gives the impression their addition was a last minute action by Harvey, where perhaps he only included significant specimens such as those showing a wider range of distribution than previously known.

The Wehl specimens were sent to Harvey by Mueller from the Melbourne herbarium. A comparison of the species listed in the TCD accessions book (see Table 4) with the extant collection at MEL indicates that many are common to both. The accessions list probably represented duplicates of MEL specimens, because Harvey explained to Joseph Hooker in 1854, that Mueller promises:

> to give me the results of all his previous collectings & to be my faithful jackal from this time forward. Formerly he had sent his Algae to Germany for description – but no more are to go there, till they have first gone to me. Besides this, he promises me duplicates of all his future Collections of land plants &c &c (Ducker 1988, p. 141).

The fate of the Wehl specimens once they had reached TCD is not clear, and there are no Wehl specimens presently held there (John Parnell, TCD, pers. comm.). Six of the 13 specimens cited by Harvey in *Phycologia Australica* have not been located either at TCD, MEL or in the National Herbarium of New South Wales (NSW) (John Parnell, TCD, pers. comm.; MELISR 2019; PlantNet 2019).

On completion of *Phycologia Australica*, Harvey decided not to continue with any algal work and presumably either returned the Wehl specimens to MEL or sent them to someone else. If doing the latter, then an obvious person was Otto Sonder who described *Gigartina wehliae* on a specimen collected by Clara Wehl (Sonder 1871). The Sonder herbarium

Table 2. Wehl specimens associated with the typification of algae, fungi and plants. Nomenclature of algae follows AANI (2020); fungi follows May & Wood (1997) and May *et al.* (2003) updated from cited references; and flowering plants follows APC (2020). For some names there is further type material collected by others, but only Wehl specimens are cited. Lectotypifications are provided where relevant. Images of MEL specimens are available on JSTOR (2020).

Algae	
Gigartina wehliae Sonder, *Abh. Nat. Ver. Hamburg* 5: 62, pl. iv (1871), as "*Gigartina (Mastocarpus) wehliae*". Type citation: "Hab. M'Donnel Bay, Mrs Wehl; Port Phillip Heads, Dr. F.v. Müller". Specimen: South Australia. Port Macdonnell, no date, *Mrs [Clara] Wehl s.n.*; syn: LD; MEL652140. Current name: ***Gigartina wehliae***.	
Sarcodia marginata J.Agardh, *Acta Universitatis Lundensis* 28(6): 98 (1892). Type citation: "Hab. ad oras australes Novae Hollandiae! ad Port Phillip a J. Br. Wilson (sub n:ris 7, 15, 18, 21, 47, 84) missa; ad Rivoli Bay a D:na Wehl lectam missit F. de Mueller.". Specimen: South Australia. Rivoli Bay, no date, *Wehl s.n.*; syn: MEL516189. Current name: ***Sarcodia marginata***.	
Fungi	
Agaricus (Collybia) olivaceo-albus Cooke & Massee in Cooke, *Grevillea* 15: 93 (1887), *nom. illeg.*, *non Agaricus olivaceoalbus* Fr., *Observ. Mycol.* 1: 5 (1815) Type citation: "On the ground under she-oaks (*Casuarina quadrivalvis*). Lake Bonney. (Wehl., No. 3, cum icone)". Specimen: "on the ground under she-oaks (*Casuarina quadrivalvis*), Lake Bonney, S.A., 1886, M. Wehl No. 3" [according to Pegler, *Austral. J. Bot.* 13: 341 (1965)]; holo: K(M) 129475. Current name: ***Oudemansiella eradicata*** (Kalchbr.) Zhu L.Yang, G.M.Muell., G.Kost & Rexer, according to Yang *et al.* (2009) also taking into account the synonymy of *A. olivaceo-albus* and *A. eradicata* Kalchbr. established by Petersen (2008).	Figs 49, 56
Agaricus (Collybia) ozes var. *crassipes* Cooke & Massee in Cooke, *Grevillea* 15: 93 (1887). Type citation: "On low damp ground. Lake Bonney. (Wehl., No. 22, cum icone)". Specimen: "Lake Bonney, S.A., M. Wehl 22" [according to Pegler, *Austral. J. Bot.* 13: 342 (1965)]; holo: K(M). Current name: ***Inocybe crassipes*** (Cooke & Massee) Pegler.	Figs 54, 55, 59
Agaricus (Collybia) veluticeps Cooke & Massee in Cooke, *Grevillea* 16: 30 (1887). Type citation: "In fern gully. Lake Bonney. (Wehl., No. 3, with fig.)". Specimen: "3. Ferny gully, *Ag. (Coll.) veluticeps* C & M", "*Ag. (Collybia) veluticeps* C & M, Lake Bonney, Australia"; holo: K(M). Current name: ***Collybia veluticeps*** (Cooke & Massee) Sacc.	
Agaricus (Entoloma) laeticolor Cooke & Massee in Cooke, *Grevillea* 16: 31 (1887), *nom. illeg., non Agaricus laeticolor* Lev. *Iconogr. Champ. Paulet*: 32 (1855). Type citation: "On the ground in sandy soil, near Melbourne. (Miss Wehl., No.11, with fig.)". Specimen: "on sandy soil, near Melbourne, M. Wehl No. 11" [according to Pegler, *Austral. J. Bot.* 13: 337 (1965)]; holo: K(M). Current name: ***Entoloma laeticolor*** Sacc.	Fig. 46
Agaricus (Entoloma) melaniceps Cooke & Massee in Cooke, *Grevillea* 16: 31 (1887). Type citation: "On the ground. Near Melbourne. (Miss Wehl., No. 41, with fig.)". Specimen: "on the ground, near Melbourne, M. Wehl No. 41" [according to Pegler, *Austral. J. Bot.* 13: 339 (1965)]; holo: K(M) 160368. Current name: ***Melanoleuca melaniceps*** (Cooke & Massee) Pegler.	
Agaricus (Flammula) limonius Cooke & Massee in Cooke, *Grevillea* 15: 94 (1887), *nom. illeg., non Agaricus limonius* Fr., *Observ. Mycol.* 2: 56 (1818). Type citation: "On rich soil. Lake Bonney. (Wehl., No. 19, c. icon)". Specimen: "on damp ground, Lake Bonney, S.A., M. Wehl No. 19" [according to Pegler, *Austral. J. Bot.* 13: 338 (1965)]; holo: K(M). Current name: ***Agrocybe limonia*** Pegler.	Fig. 60
Agaricus (Hebeloma) olidus Cooke & Massee in Cooke, *Grevillea* 15: 93 (1887). Type citation: "On stony ground. Lake Bonney. (Wehl., No. 7, c. icon.)". Specimens: "on stony ground, Lake Bonney, S.A., 1886, M. Wehl No. 7" [according to Pegler, *Austral. J. Bot.* 13: 341 (1965)]; holo: K(M). Current name: ***Agrocybe olida*** (Cooke & Massee) Pegler.	
Agaricus (Lepiota) columbicolor Cooke & Massee in Cooke, *Grevillea* 16: 30 (1887), *nom. illeg., non Agaricus columbicolor* Berk. & Broome, *J. Linn. Soc. Bot.* 11(56): 503 (1871). Type citation: "On the ground. Lake Bonney. (Miss Wehl, No. 26, with fig.)". Specimen: "*Ag (Lepiota) columbicolor* C & M, not B & Br, Melbourne", "26, In ferny gully, *Ag (Lepiota) columbicolor* C & M"; holo: K(M) 192530. Current name: ***Lepiota lavendulae*** (Cooke & Massee) Sacc. Note: *Agaricus lavendulae* Cooke & Massee, *Grevillea* 16(79): 72 (1888) is a replacement name for *Agaricus columbicolor* Cooke & Massee *non* Berk. & Broome. It is typified by the type of the replaced name, as cited above.	Fig. 47
Agaricus (Lepiota) obclavatus Cooke & Massee in Cooke, *Grevillea* 16: 30 (1887). Type citation: "On charred ground under gum tree, near Melbourne. (Miss Wehl., No. 14, with fig.)". Specimen: "14, In charcoal under a gum tree, *Ag (Lepiota) obclavatus* C & M"; holo: K(M). Current name: ***Lepiota obclavata*** (Cooke & Massee) Sacc.	

Fungi *cont.*

Agaricus (Mycena) subcorticalis Cooke & Massee in Cooke, *Grevillea* 15: 93 (1887).
Type citation: "On log of *Banksia*. Lake Bonney. (Wehl., No. 16, cum icone)".
Specimen: "on *Banksia* sp., Wehl 16" [according to K specimen database]; holo: K(M) 37438.
Current name: ***Mycena subcorticalis*** (Cooke & Massee) Sacc.

Agaricus (Pleurotus) australis Cooke & Massee in Cooke, *Grevillea* 15: 93 (1887).
Type citation: "On roots of *Leptospermum*. Lake Bonney. (Wehl., No. 14, c. icon.)".
Specimen: "on roots of *Leptospermum* sp., Lake Bonney, S.A., M. Wehl No. 14 [according to Pegler, *Austral. J. Bot.* 13: 325 (1965)]; holo: K(M) 59506. Fig. 56
Current name: ***Pleurotus australis*** Sacc.

Agaricus (Pleurotus) polychromus Cooke & Massee in Cooke, *Grevillea* 16: 31 (1887), *nom. illeg., non Agaricus polychromus* Berk. & Broome, *J. Linn. Soc. Bot.* 11(56): 528 (1871).
Type citation: "On rotton [sic] wood (?). Melbourne. (Wehl., No. 1)".
Specimen: "Wehl No. 1" [pers comm. Begoña Aguirre-Hudson, K]; holo: K(M).
Current name: ***Pleurotus polyphemus*** (Cooke & Massee) Sacc.
Note: *Agaricus (Pleurotus) polyphemus* Cooke & Massee, *Grevillea* 17(79): 72 (1888) is a replacement name for *Agaricus polychromous* Cooke & Massee *non* Berk. & Broome. It is typified by the type of the replaced name, as cited above.

Agaricus (Pluteus) wehlianus F.Muell. ex Cooke, *Grevillea* 15: 93 (1887).
Type citation: "On rotten wood, or on the ground. Lake Bonney. (Wehl., No. 11, c. icon.)".
Specimen: "on low damp ground, Lake Bonney, S.A., M. Wehl No. 11" [according to Pegler, *Austral. J. Bot.* 13: 348 (1965)]; holo: K(M). Figs 50, 58
Current name: ***Pluteus wehlianus*** (F.Muell. ex Cooke) Sacc.

Boletus (Versipelles) australis Cooke & Massee in Cooke, *Grevillea* 16: 32 (1887).
Type citation: "On the ground. Near Melbourne. (Wehl., No. 4, with fig.)".
Specimen: "1887, Wehl 4" [according to K specimen database]; holo K(M) 177960.
Current name: ***Boletus australis***.

Cantharellus politus Cooke & Massee in Cooke, *Grevillea* 16: 32 (1887).
Type citation: "On the ground in fern gully. Near Melbourne. (Miss Wehl., No. 27, with fig.)".
Specimen: "on ground, Melbourne, M. Wehl No. 27" [according to Pegler, *Austral. J. Bot.* 13: 343 (1965)]; holo: K(M) 59488. Fig. 53
Current name: ***Cantharellus politus***.

Ombrophila radicata W.Phillips ex Cooke, *Grevillea* 16: 33 (1887).
Type citation: "Stoney Range. Melbourne. (Miss Wehl., No. 2, with fig.)".
Specimen: "2, Found on stoney range, Melbourne, Miss Wehl", "*Ombrophila radicata* Phil. n. s., near Melbourne, Miss Wehl"; holo: K(M) 192505.
Current name: ***Ombrophila radicata***.

Panus carbonarius Cooke & Massee in Cooke, *Grevillea* 15: 94 (1887).
Type citation: "On spots where ferns had been burnt. Lake Bonney. (Wehl., No. 6, c. icon.)".
Specimen: "Lake Bonney, S.A., M. Wehl No. 6" [according to Pegler, *Austral. J. Bot.* 13: 327 (1965)]; holo: K(M). Figs 51, 52, 57
Current name: ***Hohenbuehelia carbonaria*** (Cooke & Massee) Pegler.

Flowering plants

Goodenia pusilliflora F.Muell., *Vict. Naturalist* 5(1): 11 (1888).
Type citation: "Generally on sandy or somewhat saline ground". Fifteen collections are cited, including "near the Broughton-River, Miss L. Wehl" [lecto: Junction of Murray and Darling rivers, July 1882, *Holding s.n.*: MEL23136, according to Carolin, *Telopea* 3(4): 548 (1990)].
Specimen: South Australia. Near the Broughton-River, no date, *Miss L. Wehl s.n.*; syn: MEL23154.
Current name: ***Goodenia pusilliflora***.

Helipterum jessenii F. Muell., *Vict. Naturalist* 7(4): 48 (1890).
Type citation: "Widely distributed through the extra-tropic desert regions". Twenty-five collections are cited including "Barrier-Ranges, E. Wehl" [lecto: Port Augusta, 1885, *Richards s.n.*; MEL1538889, according to Wilson, *Nuytsia* 7(1): 92 (1989)].
Specimens: New South Wales. Barrier-Ranges, no date, *F.E.T. Wehl s.n.*; syn: MEL1538899, MEL1539161, MEL1539167.
Current name: ***Hyalosperma semisterile*** (F.Muell.) Paul G. Wilson.

Pultenaea pubescens H.B.Will. ex J.M.Black, *Fl. S. Austral.* 2: 301 (1924).
Type citation: "Cape Northumberland to Beachport and Lake Bonney, S.E. Sept.–Dec."
Specimens: South Australia. Mt Gambier, no date, *E. Wehl s.n.*; syn: MEL35272; Lake Bonney, 1882, *Mrs E. Wehl s.n.*; syn: MEL630483.
Current name: ***Pultenaea hispidula*** R.Br. ex Benth.

Trachycaryon klotzschii F.Muell., *Trans. Phil. Soc. Victoria* 1: 15 (1854).
Type citation: "On sandhills near Corner Inlet, and, in various localities in South Australia" [lecto: Torrens River, Adelaide, *Mueller s.n.*: MEL107939, according to Gross & Whalen, *Aust. Syst. Bot.* 9(5): 758 (1996)].
Specimen: South Australia, Lake Hordan, no date, *E.F.D. Wehl s.n.*; syn: MEL107941.
Current name: ***Adriana quadripartita*** (Labill.) Müll. Arg.

Table 3. Primary taxonomic citations for Wehl specimens of algae. Includes original name, [current name according to AANI (2020) if different], verbatim citation, place of publication of the citation, and relevant specimens.

Species	Citation	Publication	Specimen
Apjohnia laetevirens Harv.	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: lix, pl. V (1863).	MEL0676554–MEL0676556; NSW810704
Callithamnion griffithsioides Sond. [=*Macrothamnion pellucidum* (Harv.) Woll.]	M'Donnell Bay, Mrs. Wehl!	Harv., *Phycol. Austral.* 5: li, pl. CIX (1863).	MEL0010293
Chara contraria A.Braun ex Kütz.	Lake Bonney, Miss Wehl	F.Muell., *Trans. Roy. Soc. South Australia* 12: 149 (1889).	L, unnumbered
Chara leptopitys A.Braun	Lake Bonney, Miss Wehl	F.Muell., *Trans. Roy. Soc. South Australia* 12: 149 (1889).	Not located
Chauvinia coriifolia Harv. [= *Chauviniella coriifolia* (Harv.) Papenf.]	M'Donnell Bay, Rev. J.E. Woods, Mrs. Wehl!	Harv., *Phycol. Austral.* 5: xxx, pl. CI (1863).	Not located
Gigartina radula (Esper) J. Agardh [= *Sarcothalia radula* (Esper) Edyvane & Womersley]	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xliii (1863).	MEL0652103; NSW830551
Gigartina wehliae Sond.	M'Donnell Bay, Mrs Wehl	Sond., *Abh. Naturwiss. Naturwiss. Verein Hamburg* 5(2): 33-74, pls I–VI (1871).	MEL652140
Delesseria revoluta Harv. [= *Hypoglossum revolutum* (Harv.) J.Agardh]	M'Donnell Bay, Mrs. Wehl!	Harv., *Phycol. Austral.* 5: xxxi, pl. CLXX (1863).	MEL0502930
Laurencia heteroclada Harv. [= *Laurencia filiformis* (C.Agardh) Mont.]	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xxv, pl. CXLVIII (1863).	Not located
Nitophyllum erosum Harv. [= *Haraldiophyllum erosum* (Harv.) A.Millar & Huisman]	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xxxi, pl. XCIV (1863).	MEL0691888, MEL0691889
Nitophyllum pristoideum Harv. [= *Nitospinosa pristoidea* (Harv.) Womersley]	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xxxii, pl. CCXXIX (1863).	MEL0691936
Phacelocarpus complanatus Harv.	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xxxiii, pl. CCLII (1863).	MEL0697794, MEL0697795
Rhodomela trigenea Harv. [= *Heterocladia caudata* L.E.Phillips, H.G.Choi, G.W.Saunders & G.T.Kraft.]	M'Donnell Bay, Mrs. Wehl!	Harv., *Phycol. Austral.* 5: xviii, pl. CXXVI (1863).	Not located
Rytiphloea elatus (Sond.) Harv. [= *Cladurus elatus* (Sond.) Falkenb.]	M'Donnell Bay, Mrs. Wehl!	Harv., *Phycol. Austral.* 5: xviii, pl. CCXXXVI (1863).	Not located
Sarcodia marginata J.Agardh	Rivoli Bay, Wehl s.n.	J.Agardh, *Analecta Algol.* 98–99 (1892).	MEL0516189
Wrangelia crassa Hook.f. & Harv. [= *Involucrana crassa* (Hook.f. & Harv.) Gordon-Mills]	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xxviii (1863).	Not located
Wrangelia myriophylloides Harv. [= *Wollastoniella myriophylloides* (Harv.) Gordon-Mills]	M'Donnell Bay, Mrs. Wehl	Harv., *Phycol. Austral.* 5: xxviii, pl. CCXXIV (1863).	MEL0015339

was purchased by the Victorian government for the Melbourne Herbarium in 1883 (Gallagher & de Moraes 2014). The association between Harvey and Sonder has been investigated and there is no evidence of any connection regarding the Wehl specimens (Ducker 1988, p. 351). In the protologue for *G. wehliae*, there is similarly no evidence of any specific connection, and as translated from German,[49] Sonder stated:

> I take the opportunity to add a new and beautiful species of this genus from South Australia and dedicate it to the discoverer, Mrs. Wehl, whose zeal for the algal science is known from Harvey's Phycologia Austr. and whose generosity provided me with a beautiful collection of algae from the area mentioned, thanks to the assistance of her brother Dr F. v. Müller (Sonder 1871).

This suggests that in this case Mueller provided the Wehl specimen directly to Sonder, rather than him receiving it from Harvey or another secondary source. However, with regard to the Wehl algal specimens that

49 Ich benutze die Gelegenheit, hier eine neue und schöne Art dieser Gattung aus Südaustralien hinzuzufügen und dieselbe der Entdeckerin, Mrs. Wehl, deren Eifer für die Algenkunde aus Harvey's Phycologia Austr. bekannt ist und deren Liberalität ich durch Vermittlung ihres Bruders, des Herrn Dr. F. v. Müller, eine schöne Sammlung Algen aus der genannten Gegend verdanke, zu widmen.

Table 4. Marine algae specimens received in 1863 by W.H. Harvey at Trinity College, Dublin, collected by Mrs Wehl from McDonnell Bay, South Australia. Taxa include original accession name and number (List 1 is continuous from 1 to 48; List 2 is discontinuous from 1 to 33). Current names are according to AANI (2020).

List 1

Number	Accession name (as given)	Current name
1	*Thuretia quercifolia* Dec	*Thuretia quercifolia* Decne.
2	*Dasya villosa* H.	*Dasya villosa* Harv.
3	*Rhytiphlaea elata* S.	*Cladurus elatus* (Sond.) Falkenb.
4	*Rhodomela trigenea* H	*Heterocladia caudata* L.E.Phillips, H.G.Choi, G.W.Saunders & G.T.Kraft
5	*Laurencia elata* H	*Laurencia elata* (C.Agardh) Hook.f. & Harv.
6	*Laurencia forsteri*	*Laurencia forsteri* (Mert. ex Turner) Grev.
7	*Laurencia tasmanica* H	*Laurencia tasmanica* Hook.f. & Harv.
8	*Laurencia heteroclada* H	*Laurencia filiformis* (C.Agardh) Mont.
9	*Wrangelia crassa* H	*Involucrana crassa* (Hook.f. & Harv.) Gordon-Mills
10	*Wrangelia myriophylloides* H.	*Wollastoniella myriophylloides* (Harv.) Gordon-Mills
11	*Corallina cuvierii*	*Haliptilon roseum* (Lam.) Garbary & H.W.Johans.
12	*Amphiroa charoides*	*Metagoniolithon radiatum* (Lam.) Ducker
13	*A. stellulata*	*Metagoniolithon radiatum* (Lam.) Ducker
14	*Mastophora lamourouxii*	*Metamastophora flabellata* (Sond.) Setch..
15	*Chauvinia imbricata*	*Phitymophora amansioides* (Sond.) Womersley
16	*Delesseria endiviifolia*	*Hymenena endiviaefolia* (Hook.f. & Harv.) Womersley
17	*Del. revoluta* H.	*Hypoglossum revolutum* (Harv.) J.Agardh
18	*Nitophyllum erosum* H.	*Haraldiophyllum erosum* (Harv.) A.Millar & Huisman
19	*Nit. pristoideum* H	*Nitospinosa pristoidea* (Harv.) Womersley
20	*N. multipartitum*	*Hymenena multipartita* (Hook.f. & Harv.) Kylin
21	*Melanthalia obtusata*	*Melanthalia obtusata* (Labill.) J.Agardh
22	*Curdiea laciniata* H.	*Curdiea angustata* (Sond.) A.Millar
23	*Phacelocarpum billardieri*	*Phacelocarpus peperocarpos* (Poiret) M.J. Wynne, Arder & P.C.Silva
24	*Ph. complanatus*	*Phacelocarpus complanatus* Harv.
25	*Gelidium aspersum*	*Gelidium aspersum* (C.Agardh) Grev.
26	*Acanthococcus ewingii*	*Mychodea hamata* Harv.
27	*Hypnea seticulosa*	*Hypnea charoides* J.V.Lamour.
28	*Acrotylus australis* Ag	*Acrotylus australis* J.Agardh
29	*Plocamium procerum*	*Plocamium mertensii* (Grev.) Harv.
30	*Pl. costatum* Ag.	*Plocamium cirrhosum* (Turner) M.J.Wynne
31	*Gigartina radula*	*Sarcothalia radula* (Esper) Edyvane & Womersley
32	*Gigartina flabellata* Ag.	*Gigartina muelleriana* Setch. & N.L.Gardner
33	*Ballia callitricha* Ag	*Ballia callitricha* (C.Agardh) Kütz.
34	*Spyridia filamentosa*	*Spyridia filamentosa* (Wulfen) Harv.
35	*Callitha griffithsioides* Sond.	*Macrothamnion pellucidum* (Harv.) E.M.Woll.
36	*Cystophora platylobium*	*Cystophora platylobium* (Mertens) J.Agardh

List 1 *cont.*

Number	Accession name (as given)	Current name
37	*Cystophora subfarcinata* Ag.	*Cystophora subfarcinata* (Mert.) J.Agardh
38	*Cyst. paniculata*	*Acrocarpia paniculata* (Turner) Aresch.
39	*C. spartioides*	*Cystophora moniliformis* (Esper) Womersley & Nizam. ex Womersley
40	*Sargassum varians* S.	*Sargassum varians* Sond.
41	*Caulerpa cactoides*	*Caulerpa cactoides* (Turner) C.Agardh
42	*Caulerpa hypnoides*	*Caulerpa flexilis* J.V.Lamour.
43	*C. sonderi*	*Caulerpa obscura* Sond.
44	*C. harveyi* FM	*Caulerpa longifolia* C.Agardh
45	*C. sedoides*	*Caulerpa sedoides* C.Agardh
46	*Apjohnia laetevirens*	*Apjohnia laetevirens* Harv.
47	*Conferva darwinii*	*Chaetomorpha coliformis* (Mont.) Kütz.
48	*Ulva latissima*	*Ulva latissima* L.

List 2

Number	Accession name (as given)	Current name
1	*Sphacelaria pulvinata* (Fl. Nov. Zel.)	*Sphacelaria pulvinata* Hook.f. & Harv.
2	*Leathesia umbellata*	*Leathesia umbellata* (C.Agardh) Menegh.
3	*Callith. muelleri* Sond.	*Heterothamnion muelleri* (Sond.) J.Agardh
4	*Callith. dispar* H.	*Elisiella dispar* (Harv.) Womersley
5	*Dasya capillaris* ?	*Dasya capillaris* Hook.f. & Harv.
6	*Griffithsia antarctica*	*Griffithsia antarctica* Hook.f. & Harv.
7	*Plocamium costatum* var	*Plocamium cirrhosum* (Turner) M.J.Wynne
10	*Corallinia* (no. 452 H.) *nana*, Lev.	*Corallina pusilla* Sond.
12	*Dasya muelleri*	*Heterosiphonia muelleri* (Sond.) De Toni
13	*Laurencia forsteri*	*Laurencia forsteri* (Mert. ex Turner) Grev.
14	*Dictymenia harveyana*	*Dictymenia harveyana* Sond.
15	*Hypnea fastigiata* H. (no. 343)	*Mychodea pusilla* (Harv.) J.Agardh
16	*Pol. dendritica* Ag.	*Dipterosiphonia dendritica* (C.Agardh) F.Schmitz
17	*Pol. abscissa* H & H (Pol. 191 Harv. Ag.)	*Polysiphonia subtilissima* Mont.
19	*Pol. frutex* H.	*Polysiphonia decipiens* Mont.
20	*Dasya hormoclados*	*Lophothalia hormoclados* (J.Agardh) J.Agardh
22	*Spyridia opposita*	*Spyridia dasyoides* Sond.
23	*Pol. hookeri* H.	*Echinothamnion hookeri* (Harv.) Kylin ex P.C.Silva
27	*Horea fruticulosa* H.	*Gloiocladia fruticulosa* (Harv.) R.E.Norris
28	*Horea fruticulosa* H.	*Gloiocladia fruticulosa* (Harv.) R.E.Norris
29	*Areschougia ? dumosa* H infr.	*Melanema dumosum* (Harv.) Min-Thein & Womersley
30	*Caulerpa harveyi*	*Caulerpa longifolia* C.Agardh
33	*Monostroma (Ulva) lactuca* ?	*Ulva lactua* L.

arrived at Harvey's herbarium in TCD, the trail of despatch and receipt is unable to be resolved.

It is known that Mueller also sent algal specimens to Jacob Agardh, of Lund University, Sweden.[50] Agardh responded with identifications of those specimens collected by Clara Wehl at Rivoli Bay (Table 5).[51] In addition to material examined by Harvey, Sonder and Agardh, two species of Characeae, *Chara contraria* A.Braun ex Kütz and *C. leptopitys* A.Braun were identified by Swedish phycologist Otto Nordstedt among material collected by Marie Wehl at Lake Bonney that had been provided by Mueller (Mueller 1889a; AANI 2020).

Plants

Over the course of fifteen years, Mueller despatched between 70,000 and 90,000 Australian herbarium specimens from Melbourne to George Bentham at Kew who required them for compiling *Flora Australiensis* (Bentham 1863–1878; Daley 1927; Orchard 1999).[52] About a third of the specimens known to have been shipped to Kew are marked with a 'B' on a corner of the reverse side of the label accompanying the specimen. The history of these marked specimens has been an ongoing investigation, although recent reinterpretation indicates that the specimens with the 'B' were inscribed by staff at the Melbourne herbarium before transmission to Kew (Maroske and Vaughan in prep.). Previously, two explanations were forwarded by staff at the National Herbarium of Victoria in the twentieth century. One explanation was that the 'B' was inscribed personally by Bentham, but a recent comparison of handwritings indicates that Bentham did not inscribe any of the 'B's, rather they match the handwriting of a number of hands at the Melbourne herbarium including Mueller himself, Florens Theodor Reinhard Mueller (1862–64) and Johann Friedrich Carl Wilhelmi who was acting government botanist (1855–56) and later Mueller's herbarium assistant (1857–69) (Darragh 1994; George 2009). A second explanation was put forward by Dr Jim Ross on the basis of notes made on a specimen label by Theodor Mueller. This label seemed to suggest that the 'B' was inscribed by staff after the specimens were returned to Melbourne (Ross 1995), but the label is ambiguous and is also consistent with the view that the 'B' was inscribed by staff before the specimens were sent to Kew. It must be noted that Bentham examined specimens from other herbaria and those specimens do not have a letter 'B' inscribed on their label (Pina Milne, MEL, pers. comm.). Therefore only specimens that were sent by Mueller from the Melbourne herbarium are thus marked. Among the specimens inscribed with a 'B' are 13 specimens collected by Eduard Wehl (Table 6). However, these specimens were not cited in *Flora Australiensis*, although possibly having been examined by Bentham. Based on a digital and visual search of *Flora Australiensis*, only four Wehl specimens were cited by Bentham (Table 7). These were all designated with "Mrs Wehl" as the collector. Bentham's citations do not appear to have been copied from Mueller's *Fragmenta phytographiae Australiae* (Mueller 1858–1882), but determinations apparently made by Bentham at Kew, based on the specimens that he examined.

The greater part of Mueller's taxonomic work was presented in his *Fragmenta Phytographiae Australiae* (Mueller 1858–1882). A digital and visual scan of all volumes located at least twelve Wehl specimen citations. Of these, eight citations relate to extant specimens in MEL. Other publications by Mueller were also examined and a number of additional citations were recorded (Table 8).

Fungi

Mordecai Cubitt Cooke (1825–1914), one of the world's leading mycologists at the time, took an interest in Australian fungi and received specimens sent by Mueller to Kew. Cooke worked closely with George Massee (1850–1917) who was co-author of some new Australian species. During the mid-1880s, Mueller despatched to Cooke fungi specimens and illustrations that were collected and drawn by Marie Wehl from the Lake Bonney area (May *et al.* 1995). Cooke and Massee described 17 novel taxa based on Wehl specimens (Table 2) in two articles in the journal *Grevillea: a Monthly Record of Cryptogamic Botany* during 1887 (Cooke 1887a, 1887c). In the second article, Cooke specifically acknowledges the role of Mueller in communicating specimens from various collectors to him. In the two articles, all Wehl collections were noted as being accompanied by figures, except for *Agaricus polychromus*, but in fact there is an original illustration of this (Appendix 2).

Nearly all the fungi collections are accompanied by small hand-written labels in what is presumed to be the handwriting of Marie Wehl (it is not Mueller's handwriting) always with a number and a short description of the habitat and/or substrate, such as: "In a ferny gully", "On stony ground" or "Found on a decayed honeysuckle log". Sometimes information in other hands, including the name of the collector as Miss Wehl and/or determinations, has been added to the original label, such as for *Agaricus papilionaceus* (Fig. 42). There are also often additional labels, always in other handwriting to that of the small labels. In a few cases, the original small label is no longer present. In all the MEL specimens, where the collector is given, it is in the form "Miss Wehl" with the exception of *Coprinus macrorhizus* (MEL2367924, Fig. 44) and *Polyporus* sp. (MEL1055124) where the collector is given as "Miss M. Wehl", the latter in Mueller's hand.

50 F. Mueller to J. Agardh, 26 Aug.1885 (Mueller Correspondence, RBGV).

51 J. Agardh to F. Mueller, Feb. 1886 (Mueller Correspondence, RBGV).

52 Mueller gave estimates of 70,000, 80,000 and 90,000 specimens in different letters: F. Mueller to A. de Candolle, 4 Aug. 1880 (90,000); F. Mueller to E. Behm, 8 Aug. 1883 (80,000); F. Mueller to R. von Fischer-Benzon, 16 Dec. 1887 (70,000), (Mueller Correspondence, RBGV).

Table 5. Marine algae identified by Jacob Agardh, of specimens collected by Mrs Wehl at Rivoli Bay, South Australia, and sent by Ferdinand Mueller in February 1886. Current names are according to AANI (2020). Question marks in left-hand column are transcribed from the original list, whist those in right-hand column denote the most plausible name.

Names used in correspondence	**Current name**
Acrotylus australis	*Acrotylus australis* J.Agardh
Amphiroa stelligera	*Metagoniolithon stelliferum* (Lam.) Weber Bosse
Apjohnia laetevirens Harv.	*Apjohnia laetevirens* Harv.
Ballia mariana Harv. (*Ballia callitricha*)	*Inkyuleea mariana* (Harv.) H.G.Choi, Kraft & G.W.Saunders (*Ballia callitricha* (C.Agardh) Kütz.
Ballia robertiana Harv. (*Ballia scoparia*)	*Inkyuleea ballioides* (Sond.) H.G.Choi, G.T.Kraft & G.W.Saunders (*Camontagnea oxyclada* (Mont.) Pujals)
Callithamnion nodiferum J. Ag.	*Pterothamnion nodiferum* (J.Agardh) Athanas. & Kraft
Callophyllis carnea J Ag	*Callophyllis rangiferina* (R.Br. & Turner) Womersley
Callophyllis coccinea Harv.	*Callophyllis rangiferina* (R.Br. & Turner) Womersley
Callophyllis lambertii	*Callophyllis lambertii* (Turner) Kütz.
Caulerpa hypnoides	*Caulerpa flexilis* J.V.Lamour.
Caulerpa longifolia? (tantum fragmenta) [so many fragments]	*Caulerpa longifolia* C.Agardh
Ceramium puberulum Sond.	*Ceramium puberulum* Sond.
Cladophora gracilis Harv.?	*Cladophora flexuosa* (O.F.Müll.) Kütz.
Corallina cuvierii	*Haliptilon roseum* (Lam.) Garbary & H.W.Johans.
Curdiea laciniata (*Dictymenia tridens*)	*Curdiea angustata* (Sond.) A.Millar (*Dictyomenia tridens* (Mert. ex Turner) Grev.)
Cystophora paniculata	*Acrocarpia paniculata* (Turner) Aresch.
Cystophora subfarcinata	*Cystophora subfarcinata* (Mert.) J.Agardh
Delesseria imbricata (*Lenormandia muelleri*)	*Phitymophora amansioides* (Sond.) Womersley (*Lenormandia muelleri* Sond.)
Gelidium glandulaefolium Harv.	*Gelidium asperum* (C.Agardh) Grev.
Gigartina pinnata	*Gigartina pinnata* J.Agardh
Haloplegma preissii	*Haloplegma preissii* (Harv.) Mont.
Hypnea episcopalis	*Hypnea ramentacea* (C.Agardh) J.Agardh
Mastophora canaliculata Harv	*Mastophoropsis canaliculata* (Harv.) Woelk.
Melanthalia obtusata	*Melanthalia obtusata* (Labill.) J.Agardh
Nitophyllum polyanthum (*Dasya haffiae*)	*Hymenena curdieana* (Harv.) Kylin (*Dasya haffiae* Harv.)
Nizzymenia australis	*Nizymenia australis* Sond.
Phacelocarpus labillardieri (*Phacelocarpus procerum*)	*Phacelocarpus peperocarpus* (Poir.) M.J.Wynne, André & P.C.Silva (?)
Phacelocarpus apodus	*Phacelocarpus apodus* J.Agardh
Phacelocarpus complanatus	*Phacelocarpus complanatus* Harv.
Pterocladia lucida	*Pterocladia lucida* (R.Br. ex Turner) J.Agardh
Ptilota coralloidea	*Euptilota articulata* (J.Agardh) F.Schmitz
Ptilota rhodocallis	*Rhodcallis elegans* Kütz.
Rhodymenia australis (*Plocamium angustum*)	*Rhodymenia sonderi* P.C.Silva (*Plocamium angustum* (J.Agardh) Hook.f. & Harv.)
Sargassum sonderi	*Sargassum sonderi* (J.Agardh) J.Agardh
Sargassum verruculosum	*Sargassum verruculosum* C.Agardh
Sphacelaria paniculata Suhr	*Halopteris paniculata* (Suhr) Prud'homme
Spyridia opposita (*Spyridia costatum*)	*Spyridia dasyoides* Sond. (?)
Ulva rigida Ag.	*Ulva rigida* C.Agardh
Zonaria canaliculata J.Ag.	*Homoeostrichus canaliculatus* (J.Agardh) J.Agardh

Table 6. Wehl specimens inscribed with 'B' in MEL. Includes original name [current name according to APC (2020) if different], along with label data, the base taxonomy of the species, the reference for the name in *Flora Australiensis* and the relevant specimen.

Species	Label data	Base Taxonomy and *Flora Australiensis* reference	Specimen
Billardiera scandens Sm. var. *scandens*	Mt Gambier, E.F.D. Wehl	Benth., *Fl. Austral.* 1: 124 (1863).	MEL65195
Eucalyptus leucoxylon subsp. *pruinosa* (F.Muell. ex Miq.) Boland	Bendigo [1852?], F.D.E. Wehl	Miq., *Ned. Kruidk. Arch.* 4(1): 127 (1856). [Benth., *Fl. Austral.* 3: 210 (1866).]	MEL1613478
Goodia medicaginea F.Muell.	Reedy Creek, 1850, E. Wehl	F.Muell, *Fragm.* 1(1): 10 (1858). [Benth., *Fl. Austral.* 2: 177 (1864).]	MEL2090094
Helichrysum anthemoides Sieber ex Spreng. [= *Rhodanthe anthemoides* (Sieber ex Spreng.) Paul G.Wilson]	The plain between Mount Emu and the Hopkins River, the so-called Plains – Port Phillip, 21 Sept. 1851, E.F.D. Wehl	Spreng., *Syst. Veg. Edn.* 17, 3: 484 (1826). [Benth., *Fl. Austral.* 3: 641 (1866).]	MEL109159
Helichrysum ferrugineum Less. [= *Ozothamnus ferrugineus* (Labill.) Sweet]	Mt Gambier, E. Wehl	Sweet, *Hort. Brit.* 1: 221 (1826). [Benth., *Fl. Austal.* 3: 631 (1866).]	MEL2164806
Lotus australis Andrews	Reedy Creek, Oct., E.F.D.Wehl	Andrews, *Bot. Repos.* 10(128–131): pl. 624 (1811). [Benth., *Fl. Austral.* 2: 188 (1864).]	MEL280009
Microseris sp.	Lake Hawdon, July-August, E.F.D Wehl	Benth., *Fl. Austral.* 3: 677 (1866).	MEL64872
Olearia ramulosa (Labill.) Benth.	Reedy Creek, E.F.D. Wehl	Benth., *Fl. Austral.* 3: 476 (1867).	MEL2164946
Olearia rudis (Benth.) F.Muell. ex Benth.	Lake Hawdon, November, E.F.D. Wehl	Benth., *Fl. Austral.* 3: 487 (1867).	MEL2163341
Ptilotus macrocephalus (R.Br.) Poir.	Toward Mt Gambier, Wehl	Poir., *Encyclop. Method. Bot., Suppl.* 4(2): 620 (1816). [Benth., *Fl. Austral.* 5: 226 (1870).]	MEL2220913
Pultenaea hispidula R.Br. ex Benth.	Mt Gambier, wet in winter, dry in summer, E. Wehl	Benth., *Fl. Austral.* 2: 133 (1864).	MEL630483
Pultenaea prostrata Benth. ex Hook.f.	Reedy Creek, July, Wehl	Hook.f., *Fl. Tasman.* 1(2): 89 (1856). [Benth., *Fl. Austral.* 2: 138 (1864).]	MEL2093861
Ranunculus sp. [= *Ranunculus pachycarpus* B.G.Briggs]	Lake Horden [Hawdon], August 1850, E.F.D. Wehl	Benth., *Fl. Austral.* 1: 9–15 (1863).	MEL2209024

Table 7. Wehl specimens cited in *Flora Australiensis*. Includes original name [the current name according to APC (2020) if different], along with the citation and the reference for the name in *Flora Australiensis*, and the relevant specimen.

Species	Citation	Publication	Specimen
Anguillaria dioica R.Br. [= *Wurmbea dioica* (R.Br.) F.Muell.]	Mount Gambier, Mrs Wehl	Benth., *Fl. Austral.* 7: 30 (1878).	MEL0583411
Festuca rigida (L.) Raspail [= *Catapodium rigidum* (L.) C.E.Hubb.	S. Australia. Lake Bonney, Mrs. Wehl	Benth., *Fl. Austral.* 7: 664 (1878).	MEL2129201
Halophila ovalis (R.Br.) Hook.f.	S. Australia. M'Donnell's Bay, Mrs. Wehl	Benth., *Fl. Austral.* 7: 183 (1878).	MEL0003780 [as *Halophila australis* Doty & B.C. Stone]
Pterostylis nana R.Br.	S. Australia. Mount Gambier, Mrs Wehl.	Benth., *Fl. Austral.* 6: 357 (1873).	Not located

Table 8. Citations of Wehl specimens by Mueller in *Fragmenta phytographiae Australiae* and other publications. Included are current names according to APC (2020), citation and publication details, and relevant specimens.

Species	Citation	Publication	Specimen
Dolichos biflorus L. [= *Vigna unguiculata* (L.) Walp. var. *unguiculata*]	Luxuriates as far south as Northern New South Wales [Henry Wehl]	F.Muell., *Select Pl. ed.* 9, 172 (1895).	Not located
Eucalyptus capitellata Sm.	Near the south-eastern borders of South Australia it occurs, as first observed by Dr. Wehl, often in a cripply state	F.Muell., *Eucalyptographia* (1879–1884).	Not located
Eucalyptus sieberiana F.Muell. [= *Eucalyptus sieberi* L.A.S. Johnson]	On low moist sandy tracks between the Glenelg River and Mount Gambier and Lake Bonney (Dr Wehl)	F.Muell., *Eucalyptographia* (1879–1884).	Not located
Eucalyptus virgata Sieber ex Spreng.	…prope montem Gambier Doctore Wehl	F.Muell., *Fragm.* 11(89): 38 (1878).	Not located
Gentiana saxosa G.Forst.	Lake Bonney (Clara Wehl)	F.Muell., *Fragm.* 9(79): 165 (1875).	Not located
Goodenia pusilliflora F.Muell.	near the Broughton-River, Miss L. Wehl	F.Muell., *Vict. Naturalist* 5(1): 11 (1888).	MEL0023154 Syntype
Helipterum jesseni F.Muell. [= *Hyalosperma semisterile* (F.Muell.) Paul G.Wilson]	apex of St. Vincent s Gulf, Mrs. Matthiesen	F.Muell., *Vict. Naturalist* 7(4): 48 (1890).	MEL1538957 Syntype
Imperata arundinacea Cirillo [= *Imperata cylindrica* (L.) P.Beauv.]	Mount Gambier (Wehl)	F.Muell., *Fragm.* 8(64): 126 (1873).	MEL1547767
Mazus pumilio R.Br.	Lake Bonney (Clara Wehl)	F.Muell., *Fragm.* 9(79): 167 (1875).	AD97014178
Phaseolus radiatus L. [= *Vigna radiata* (L.) R.Wilczek	Mr. Henry Wehl records that it has done splendidly in the northern part of New South Wales, enduring much dry heat	F.Muell., *Select Pl. ed.* 9, 369 (1895).	Not located
Psoralea adscendens F.Muell. [= *Cullen microcephalum* (Rchb. ex Kunze) J.W.Grimes]	Mount Gambier (Wehl)	F.Muell., *Fragm.* 9(79): 155 (1875).	Not located
Spiranthes australis (R.Br.) Lindl.	Rivoli Bay in depressions of the Hummocks, Mrs Dr. Wehl	F.Muell., *S. Sc. Rec.* 2: 200 (1882).	Not located
Styphelia sonderi F.Muell. [= *Styphelia conostephioides* (Sond.) F.Muell. ex Benth.]	ad Macdonnells Bay (Clara Wehl)	F.Muell., *Fragm.* 8(61): 54 (1873).	MEL1549160 [as *Astroloma conostephioides* (Sond.) Benth.]
Veronica gracilis R.Br.	Lake Bonney (Clara Wehl)	F.Muell., *Fragm.* 9(79): 168 (1875).	MEL0018044
Wehlia F.Muell. [= *Homalocalyx* F.Muell.]	sacratum praecaro meo Eduardo Wehl, M.D., nunc praecociter defuncto atque dicatum meae sorori dilectae Clarae Wehl, per annos ad nostras collections phytologicas benignis contributoribus	F.Muell., *Fragm.* 10(82): 22 (1876).	n/a

There are two handwritten lists from Cooke providing identifications of the Wehl fungi collections.[53] The first is entitled "Australian Fungi / Lake Bonney / Miss Wehl", with 28 sequentially numbered entries. The second is entitled "Miss Wehl's Fungi (Drawings)", with 41 sequentially numbered entries (numbers re-commencing with 1). At the foot of this second list is a note: "Drawings returned". These two lists correspond to the two articles published in *Grevillea*, as far as the new species, but also contain identifications of already known taxa. Almost all of these are fungi first described from the Northern Hemisphere, apart from No. 23 in the second list, identified as *Agaricus crociphyllus* Cooke & Massee, described earlier in 1887 from a collection by Bauerlen from Gippsland (Cooke 1887b). In the lists, for a few entries, Cooke only provides identification to above species level. For example, for no. 17 in the second list, "*Cortinarius (Telamonia)*", Cooke mentions "insufficient without colour of gills in the young stage". Cooke also notes that for some entries, there is no specimen. In the second list, there are ticks against most entries, except for those identified above species level or where there is no specimen. All extant Wehl fungi collections in K and MEL match to entries in the handwritten lists, with one exception, *Polyporus* sp. (MEL1055124), the label of which is entirely in Mueller's hand. Mueller wrote on only one other specimen in MEL (MEL227889) where he suggested the name "*Agaricus pardalius*, F.v.M" (see below).

The handwritten lists provided by Cooke form the basis for two lists of Marie's collections published by Mueller (1888, 1889b) in the *Transactions and Proceedings and Report of the Royal Society of South Australia*. The second

53 Royal Botanic Gardens Victoria, RB MSS M86B, M.C. Cooke's determinations of Australian fungi for F. v. Mueller, Dec. 1881 to Aug. 1891.

of these was presented at a meeting of the Royal Society of South Australia, on the evening of 4 March, 1888. An article in the *South Australian Register* recorded the event, stating that "a meeting of the Royal Society was held on Tuesday evening in the Public Library, Mr W. Howchin presiding" and at this "Baron F. von Mueller contributed a list of fungi collected near Lake Bonney by Miss Wehl".[54] In the first list, Mueller (1888) includes "*Agaricus leptospermi* F. v. Mueller". This is evidently Mueller's manuscript name for the taxon described by Cooke and Massee as *A. australis*, which was noted as occurring "on roots of *Leptospermum*" (Cooke 1887a). *Agaricus pardalius* is another manuscript name, which remained unpublished because Cooke determined the collection as *A. crociphyllus*, although the name "*A. pardalius*" does appear on one of the paintings in the Natural History Museum album (Appendix 2, and see below). One name that Mueller suggested, *A. wehlianus* F.Muell. ex Cooke, was taken up and formally published by Cooke (1887a).

When describing the novel species collected by Marie Wehl, Cooke (1887a) lists Lake Bonney as locality for all eight new taxa. However, Cooke (1887c) lists Lake Bonney for two new species (*Agaricus columbicolor* and *A. veluticeps*) but "Melbourne" or "Near Melbourne" for seven other new species. Some Wehl herbarium specimens in MEL and K also bear the locality "Melbourne" or "near Melbourne" in handwriting similar to that of Cooke, including one at MEL (MEL2292505, originally identified as *Peziza* sp.). Otherwise, all Marie Wehl specimens in MEL are without location details or the locality is Lake Bonney, with the exception of *Peziza vesiculosa* (MEL2292503), for which a later label has the locality "On Stoney range, ? Victoria". In one case, that of *Agaricus columbicolor*, Cooke states in the protologue (Cooke 1887c) that the species is from Lake Bonney but the label on the K specimen has "Melbourne".

There is no evidence that Marie Wehl visited Melbourne around the time she was making fungi collections. Therefore, Cooke's indication of Melbourne as the locality is considered an error for Lake Bonney. This is supported by several lines of evidence. Firstly, the list published by Mueller (1889b), which includes all the new species introduced by Cooke (1887c) is entitled "List of fungi named by Dr. M.C. Cooke, from dried specimens collected near Lake Bonney". Secondly, the habitats for collections purportedly from Melbourne are often the same as those for collections from Lake Bonney. For example, Cooke (1887c) gives the locality for *Ombrophila radicata* as "Stoney Range, Melbourne", while several of the Lake Bonney collections mentioned in the first handwritten list come from "stony ground" or more particularly from "On a stony hill" (*Agaricus umbratilis*). Other habitats such as "fern gully" and "sandy ground" are reported for species in the first handwritten list (that is explicitly of collections from Lake Bonney) as well as the collections indicated by Cooke as originating from Melbourne. It is presumed that Cooke, on receiving the second batch of specimens, and in the absence of a locality written on the original label, assumed that some were from Melbourne, as that is where Mueller had dispatched them from (although why two were noted by Cooke as being from Lake Bonney is not clear).

Cooke (1892) published *Handbook of Australian Fungi*, in which he indirectly cited many Wehl specimens, denoted only by location, mainly as Lake Bonney, rather than by the name of the collector. The contribution of "Miss Wehl" was noted in Cooke's preface as he lamented the lack of accompanying illustrations of the Australian fungi specimens but that "exceptions must be made in favour of some drawings by Miss Wehl". An interesting comment about this appeared in a letter from Mueller to William Thiselton-Dyer, Director of the Royal Botanic Gardens Kew. Mueller wrote that "Miss Wehl will be pleased of her being specially mentioned [i.e. in Cooke's preface]; she is the daughter of my Sister and the late Dr Med. Wehl. Of course, had it not been for me, she would have neither collected nor painted fungs".[55]

Illustrations by Marie Magdalene Wehl and Henrietta Jane Wehl

> Pray, thank Marie for her pretty painting.[56]

There are about 300 known illustrations by Marie Wehl and Henrietta Wehl. These include about 240 flowering plants (Appendix 1) and 60 fungi (Appendix 2). The illustrations are of specimens collected in the vicinity of Lake Bonney during a six-year period 1883–88, after the death of their father and before Henrietta married. Mueller urged his sister and her children to collect small plants growing in moist environments, and to include the root system (Mueller 1876a).[57] Encouragingly, Mueller wrote to Louise Wehl that "your brothers and sisters perhaps will look also a little more yet into the spring vegetation about Lake Bonney".[58] It is from such collections that the sisters produced many of their illustrations.

The known illustrations are possibly the remnants of a larger output. The illustrations of flowering plants are included in three surviving sketchbooks whilst the fungi are included in an album held at the Natural History Museum London and in a collection of loose illustrations at the Royal Botanic Gardens Victoria.

54 *South Australian Register*, Royal Society, 7 Mar. 1888, p. 6.

55 F. Mueller to W. Thiselton-Dyer, 30 Aug. 1892 (Mueller Correspondence, RBGV).

56 F. Mueller to Louise Wehl, 8 July 1880 (Mueller Correspondence, RBGV).

57 F. Mueller to Louise Wehl, 25 Oct. 1887 (Mueller Correspondence, RBGV). F. Mueller to Louise Wehl, 30 Oct. 1882 (Mueller Correspondence, RBGV).

58 F. Mueller to Louise Wehl, 10 Sep. 1884 (Mueller Correspondence, RBGV).

There are other incidental works included in the sketchbooks, including landscapes, portraits, greeting cards, and memorabilia, but these will not be considered further here as they are not botanically connected to Mueller. Furthermore, it has been reported that other daughters, Louise, Helene and Meta, also illustrated flowers, but there is no documentation that connects them to any of the known illustrations. It is known that Louise and Helene maintained active albums,[59] but only that belonging to Helene has been located. This is held in the Royal Botanic Gardens Victoria and it does not contain any plant illustrations.

There is no pretension regarding the artistic merit of the Wehl sisters' illustrations: they were untrained amateurs who engaged in illustration as a pastime. They did not see themselves as seriously pursuing a career in the field of flower painting or botanical illustration. The social context of the era created a situation in which women, usually of genteel circumstances, engaged in flower painting and informal botanical collecting as a form of 'wholesome' leisure. The compilation of illustrated floras by amateur flower painters was achieved somewhat anonymously and out of personal interest. Many such works are known to have languished and remain mostly forgotten as they were not done as part of the 'official' scientific regime of the era (Hewson 1999).

Although it appears that the Wehl sisters did not receive any formal education in art in their younger years, they would have been aware of instructional books and flower painting manuals that were specifically aimed at 'lady painters'. There was a considerable variety of such books available in the Victorian era, providing instruction from, and for, a feminine point-of-view (Collett 2012). There is no record of the books that were kept in the Wehl household although Clara indicated in her correspondence and poetry that they had at *Ehrenbreitstein* "books and pictures of some fame".[60] Clara also indicated that she considered it important that her daughters were able to paint, amongst other respectable feminine activities.[61]

The earliest known direct reference by Mueller to Marie's illustrations was in a letter to Louise in 1880 when he requested that she "thank Marie for her pretty painting".[62] Marie would have been 18 years old, and it is not known what the subject of the painting was or if it is extant. The only other known reference to Marie's artworks whilst she was still living in South Australia was included in a letter from Clara to her sister-in-law Auguste Mathilde Dankoler in 1882, when she wrote that "Marie is making good progress in painting. She finished a picture of this region. It will be sent to Adelaide to the Every Day Art Club, of which she is a member. She has to paint every day for one hour and this is a good exercise".[63] This indicates that she may have been receiving some instruction or tuition, but the details are not known. Marie was 30 years old at this time.

The Every Day Art Club in Adelaide was described as a "society of student artists in association with the Central School of Design".[64] Marie (as Miss M. Wehl) was included in the 'List of members 1892–3' (Overbury 1893). Annual awards and prizes were presented to club exhibitors during 1891 to 1894, published in various newspapers, but there is no evidence that Marie ever received any awards, prizes or mentions for her work.[65] From early 1894, the name of the club became the School of Design Art Club, and continued to hold exhibitions of "students' work produced outside the school".[66] It is not known what connection Marie had during this latter period with the Club, if any, and as in previous years her name was not associated with any exhibitions, medals or awards.

Surviving correspondence between Mueller and Henrietta suggests that the sisters were interested in the names of the plants that they collected and illustrated.[67] It is possible that the names that were appended to their illustrations were provided by Mueller, as it was most likely beyond their abilities to do this independently. One note in Mueller's hand survives in Henrietta's sketchbook and provides identification of *Calytrix tetragona* (as *Calycothrix tetragona*), a species that was both collected and illustrated by Henrietta. The note stated that "the name of the heath-myrtle, sent by you is *Calycothrix tetragona*; it grows also in the Murray desert". This corresponds to a specimen in MEL collected from Lake Bonney in 1889.[68]

Apart from Marie who had a special interest in fungi and orchids, the sisters appear not to have sought out rare or unusual species but otherwise collected and illustrated plants that they would have encountered during the course of daily chores and excursions. The species included many that were either weeds or native species that were adapted to disturbed pastoral environments. In this respect, the families of flowering plants that were most illustrated included Orchidaceae

59 Clara Wehl Poems (Millicent Library).

60 Millicent Library Letters, from the poem 'Ehrenbreitstein', Apr. 1883.

61 Millicent Library Letters.

62 F. Mueller to Louise Wehl, 8 July 1880 (Mueller Correspondence, RBGV).

63 Clara Wehl to Auguste Dankoler, 25 Nov. 1892 (Millicent Library).

64 *The Advertiser*, [editorial], 8 Dec. 1892, p. 4.

65 *The Advertiser*, School of design, 21 Nov. 1891, p. 7. *South Australian Register*, Everyday art club exhibition, 20 Dec. 1892, p. 5.

66 *The Advertiser*, Adelaide school of design, 6 Feb. 1894, p. 6.

67 F. Mueller to Henrietta Wehl, 27 Mar. 1887 (Mueller Correspondence, RBGV).

68 *Calytrix tetragona*, near Lake Bonney, E. Wehl; MEL086294.

(23 illustrations), Asteraceae (21), Goodeniaceae (13), Fabaceae (12), Myrtaceae (9) and Ericaceae (8), whilst the fungi amounted to about 60 illustrations.

As the illustrations are mostly unsigned, attribution to either Marie or Henrietta is here determined upon reference to the style of those works that had been signed or are known unequivocally to be the work of either. Corroborating evidence was also found in correspondence between Mueller and various recipients in which he stated that the fungi illustrations were produced by Marie.[69]

Sketchbooks, albums and loose illustrations

As noted above, the known surviving plant and fungi illustrations by the Wehl sisters are contained in three sketchbooks (two at the Royal Botanic Gardens Victoria, Melbourne, and one at the Botanic Gardens of South Australia, Adelaide); an album in the Natural History Museum London and as loose illustrations held in the Royal Botanic Gardens Victoria. Until recently, the sketchbooks were in the possession of descendants but all have been donated to the institutions noted above.

For convenience, the sketchbooks are here identified as: 1) the *Blue Jay Sketchbook* (Royal Botanic Gardens Victoria); 2) the *Large Sketchbook* (Royal Botanic Gardens Victoria); and 3) the *Plain-cover Sketchbook* (Botanic Gardens of South Australia, Adelaide). A fourth sketchbook owned by Helene Wehl has also survived (Royal Botanic Gardens Victoria) but it contains no plant or fungi illustrations.

All the illustrations in the sketchbooks invariably consist of an outline in light pencil, and with colour applied in washes, in the manner of an aquarelle. An examination of technique, design and the distinctive manner of the application of paint by Marie sets her work apart from that of Henrietta. Marie's hand could be described as 'deft' while that of Henrietta is somewhat 'clumsy'. The overall style of their illustrations indicates a 'realist' approach to their subjects. The sisters were adept at painting what they could directly observe: there was no overt effort to provide artistic arrangement or painterly effect, and the plants and fungi were illustrated as one would take a photograph in the contemporary sense to make a faithful record of the plant at hand.

Blue Jay Sketchbook (BJS): This sketchbook contains 34 pages, 18.5 cm × 13.5 cm, with two to five illustrations per page, amounting to 76 separate flower illustrations (Figs 19–28). The pages have become detached from the binding and their original order is not known. Some illustrations are dated, either to various dates in the years 1886 or 1887, some include only the month, some are captioned with the species name, and others are unnamed. Some of the illustrations have numbers but the significance of these is unknown; they do not link with plant specimen numbers.

The illustrations in this sketchbook are unsigned and no external references have been located in correspondence or other written form. Nevertheless, by manner of comparison with illustrative technique, the illustrations are most similar to those known to have been done by Marie. This sketchbook, as well as the following *Large Sketchbook* which is also attributed to Marie, was passed down through the Helene and Henry John Martin Wehl line of the family (see Table 1), who resided in Queensland, and was most recently in the possession of Helene's great-grand-daughter, Margaret Ann McDonald, presently of Cairns, Queensland. Further corroboration that Marie is the primary artist in this sketchbook is supported by the fact that Marie resided with Henry and Helene for a number of years (1918–1923) at their property Abor Downs, and that she otherwise had regular contact with them during her residence in Queensland between 1906 and 1923.

Large Sketchbook (LS): This sketchbook contains 17 pages, 36.5 cm × 24.5 cm, with rounded corners. There are 13 pages of unsigned flower illustrations, depicting 46 plant species from the Lake Bonney area (Figs 29–35). These are here attributed to Marie Wehl based on technique. In addition, there are two pages of greeting cards signed as either "H.M." or "M.W."; one page with a portrait of an unknown female person and a pencil sketch of two persons huddled in a blanket in what appears to be a European winter scene; two pages with a single landscape each, one of English's Gap, unsigned, dated "May 29 1881", the other of an unknown stream location, unsigned, dated "March 1883". The dates on the illustrations are as early as 1882, and as late as 27 May 1887. Of the 46 plant illustrations, 27 are named to species or genus. The month appears on 16 of these. Seven species are numbered in pencil of which four are the same numbers as those of herbarium specimens in MEL of the same species and therefore appear to be connected.

Plain-cover Sketchbook (PCS): This sketchbook contains illustrations by both Henrietta and Marie. It is composed of 67 pages, 25 cm × 16.6 cm, with 130 illustrations. The first 39 pages consist of 99 illustrations, one to six species per page, some dated and most named, of Lake Bonney plants. Some of those attributed to Henrietta are presented here in Figs 36–39, and some attributed to Marie are presented in Figs 40 and 41. The remainder of the sketchbook contains pasted-in items such as greeting cards, various small illustrations and snippets, one labelled "paintings done in 1883", and a few orchids "painted on a holiday to New Guinea 1928". There are five pages of well executed illustrations of orchids and moist habitat plants from the Lake Bonney area (Figs 40, 41). These have been cut from another sketchbook and pasted-in and are attributed to Marie based on technique. In addition there are a few

69 F. Mueller to W. Thiselton-Dyer, 30 Aug. 1892 (Mueller Correspondence, RBGV). Meta Stenhouse to Margaret Willis, 9 Sep. 1942 (Mueller Correspondence, RBGV).

Fig. 19. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Dianella revoluta* R.Br.; **Right** – *Goodenia geniculata* R.Br. 'Nov 86'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 20. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Goodenia geniculata* R.Br., '27.4.87'; **Right** – *Correa reflexa* var. *speciosa* (Don ex Andrews) Paul G.Wilson, '3.6.87'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 21. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Corybas diemenicus* (Lindl.) Rchb.f., 'July'; **Centre upper** – Reverse view of *Corybas diemenicus*; **Centre lower** – *Veronica peregrina* L., 'Oct.'; **Right** – *Cyrtostylis reniformis* R.Br., 'July'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 22. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Mentha satureioides* R.Br., 'March'; **Centre** – *Schenkia australis* (R.Br.) G.Mans., 'March'; **Right** – *Leptinella reptans* (Benth.) D.G.Lloyd & C.J.Webb, '1.11.87'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 23. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Asperula conferta* Hook.f.; **Right** – *Sherardia arvensis* L., '[No.] 15, Nov'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 24. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Billardiera cymosa* F.Muell., 'Oct'; **Right** – *Stellaria pungens* Brongn., 'Oct'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 25. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Diuris orientis* D.L.Jones; **Centre** –*Sebaea albidiflora* F.Muell.; **Right upper** – *Stylidium despectum* R.Br.; **Right lower** – *Veronica calycina* R.Br., 'Oct'. Reproduced with permission of the Royal Botanic Gardens Victoria.

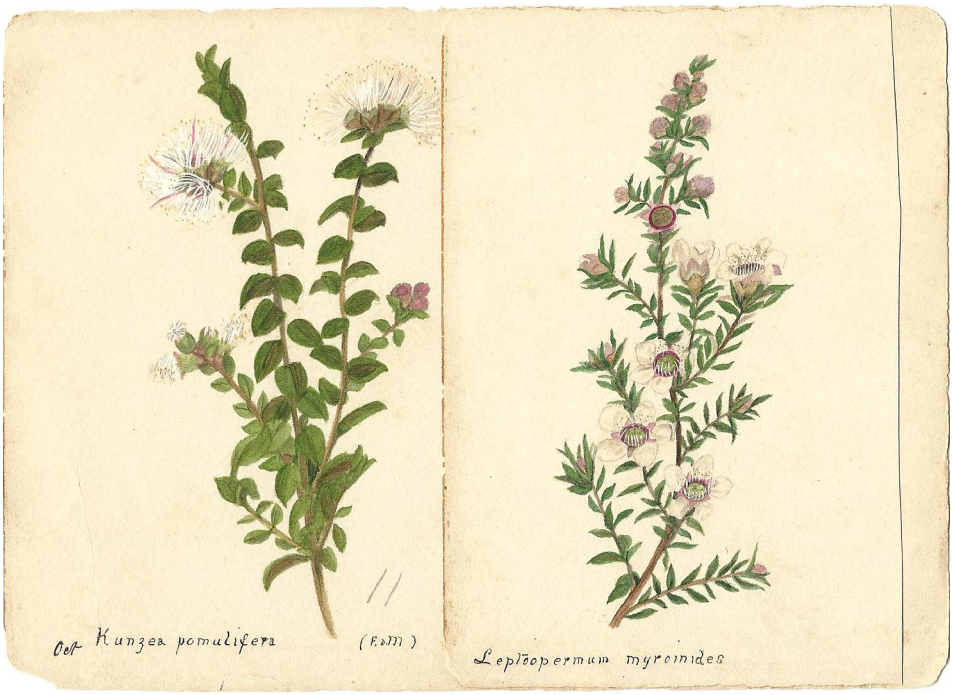

Fig. 26. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Kunzea pomifera* F.Muell., 'Oct'; **Right** – *Leptospermum lanigerum* (Sol. ex Aiton) Sm. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 27. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Comesperma volubile* Labill, 'Nov'.; **Right** – *Dipodium pardalinum* D.L.Jones, 'Jan 3 1887'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 28. Illustrations by Marie Wehl in the *Blue Jay Sketchbook*. **Left** – *Silene gallica* L.; **Right** – *Cynoglossum australe* R.Br., 'Nov'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 29. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Pyrorchis nigricans* (R.Br.) D.L.Jones & M.A.Clem., 'Oct'; **Centre** – *Caladenia moschata* (D.L. Jones) G.N. Backh., 'Oct'; **Right** – *Diuris sulphurea* R.Br., 'Nov'. Reproduced with permission of the Royal Botanic Gardens Victoria.

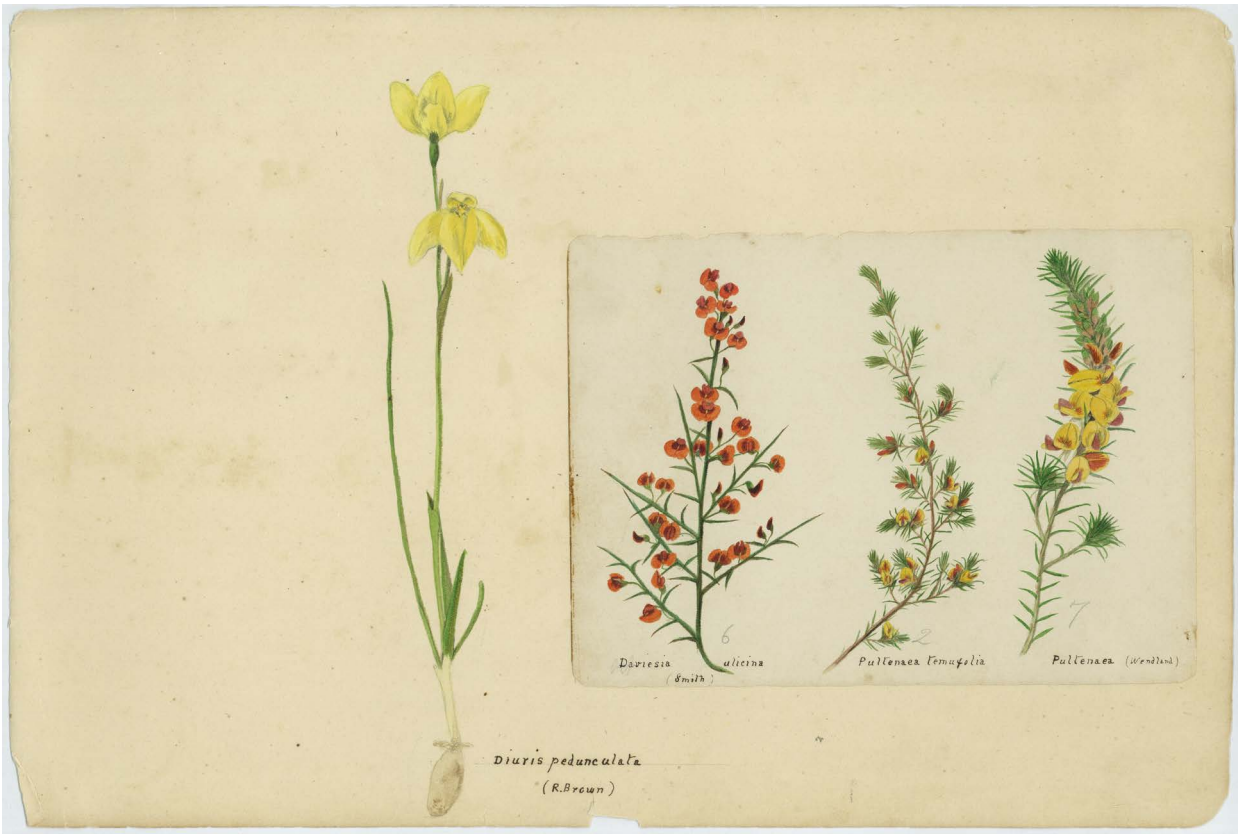

Fig. 30. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Diuris chryseopsis* D.L.Jones; **Centre left** – *Daviesia ulicifolia* Andrews; **Centre right** –*Pultenaea tenuifolia*; **Right** – *Pultenaea* sp. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 31. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Boronia filifolia* F.Muell.; **Centre left** – *Gastrodia procera* G.W.Carr; **Centre right** – *Arachnorchis* sp.; **Right** – Greeting card, 'Many happy returns of the day Oct/81 M. Wehl'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 32. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Arachnorchis tentaculata* (Schltdl.) D.L.Jones & M.A.Clem., 'Oct'; **Centre left** – *Leptoceras menziesii* (R.Br.) Lindl. 'Nov' [unnamed on sheet]; **Centre middle** – *Eriochilus cucullatus* (Labill.) Rchb.f., 'March'; **Centre right** – *Arachnorchis formosa* (G.W.Carr) D.L.Jones & M.A.Clem., 'Sep'; **Right** – *Pterostylis striata* Fitzg., 'May 27.5.87'. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 33. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Bossiaea cinerea* R.Br.; **Centre** – *Pultenaea tenuifolia* R.Br. & Sims., 'Oct'; **Right** – *Pultenaea tenuifolia* R.Br. & Sims. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 34. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Caladenia latifolia* R.Br. [pink form], 'Sept'; **Centre left** – *Pheladenia deformis* (R.Br.) D.L.Jones & M.A.Clem.; **Centre** – *Caladenia latifolia* R.Br. [albino form]; **Centre right** – *Glossodia major* R.Br.; **Right** – *Caladenia carnea* R.Br. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 35. Illustrations by Marie Wehl in the *Large Sketchbook*. **Left** – *Pultenaea* sp.; **Centre** – *Melaleuca squarrosa* Don ex Sm., 'Nov1883'; **Right** – *Melaleuca decussata* R.Br., '7 Nov 1883'. Reproduced with permission of the Royal Botanic Gardens Victoria.

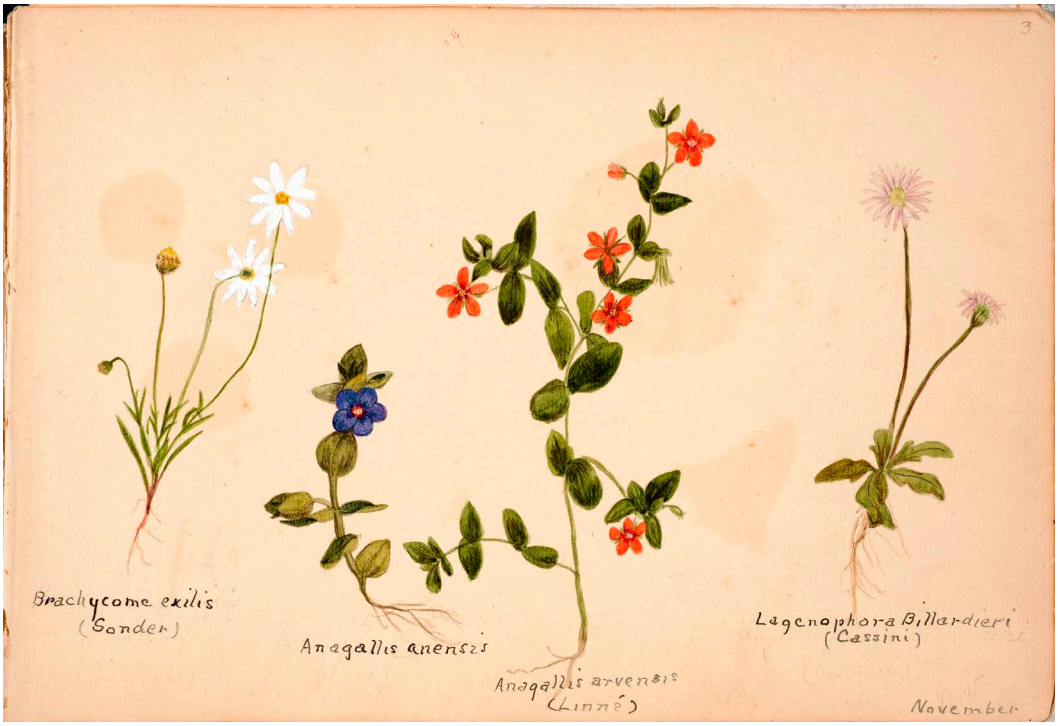

Fig. 36. Illustrations by Henrietta Wehl in the *Plain-cover Sketchbook*. **Left** – *Brachyscome exilis* Sond.; **Centre left** – *Lysimachia arvensis* (L.) Manns & Anderb.; **Centre right** – *Lysimachia arvensis* (L.) Manns & Anderb.; **Right** – *Lagenophora stipitata* (Labill.) Druce, 'November'. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia).

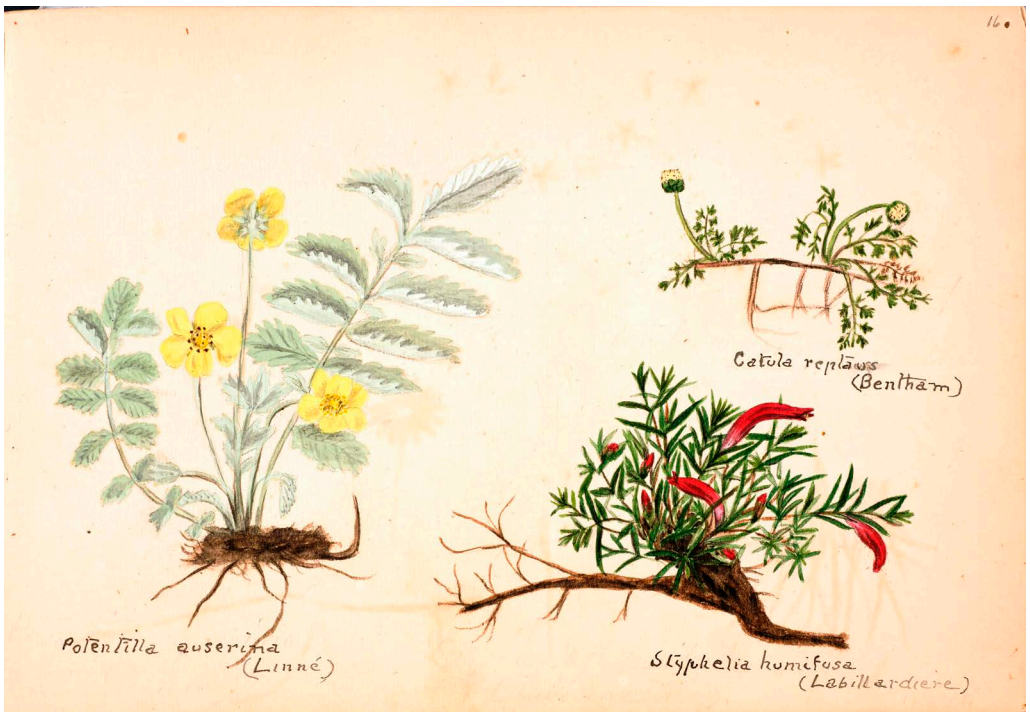

Fig. 37. Illustrations by Henrietta Wehl in the *Plain-cover Sketchbook*. **Left** – *Potentilla anserina* L.; **Right upper** – *Leptinella reptans* (Benth.) D.G.Lloyd & C.J.Webb; **Right lower** – *Astroloma humifusum* (Cav.) R.Br. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia).

Fig. 38. Illustrations by Henrietta Wehl in the *Plain-cover Sketchbook*. **Left** – *Kennedia prostrata* R.Br.; **Centre** – *Goodenia geniculata* R.Br.; **Right** – *Goodenia geniculata* R.Br., 'November'. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia).

Fig. 39. Illustrations by Henrietta Wehl in the *Plain-cover Sketchbook*. **Left** – *Cynoglossum australe* R.Br., 'Nov'; **Right** – *Calytrix tetragona* (Labill.) F.Muell. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia).

Fig. 40. Illustrations by Marie Wehl in the *Plain-cover Sketchbook*. **Left** – *Arachnorchis tentaculata* (Schltdl.) D.L.Jones & M.A.Clem.; **Centre** – *Arachnorchis fragrantissima* (D.L.Jones & G.W.Carr) D.L.Jones & M.A.Clem.; **Right** – *Arachnorchis formosa* (G.W.Carr) D.L.Jones & M.A.Clem., 'Sept 1886'. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia).

Fig. 41. Illustrations by Marie Wehl in the *Plain-cover Sketchbook*. **Left** – *Pterostylis cycnocephala* Fitzg.; **Center left** – *Prasophyllum* sp.; **Centre right** – *Pterostylis striata* Fitzg., 'May'; **Right** – *Pterostylis concinna* R.Br. Reproduced with permission of the Board of the Botanic Gardens and State Herbarium (South Australia).

Fig. 42. Specimen and illustration by Marie Wehl of *Panaeolus papilionaceus* (Bull.) Quel., as *Agaricus papilionaceus*; South Australia. Lake Bonney, *Miss Wehl 13*; MEL2367934. Reproduced with permission of the Royal Botanic Gardens Victoria.

illustrations labelled as NSW, Qld and WA. One page has a note in the hand of Mueller, and provides identification for what is assumed to have been a herbarium collection.[70] Most of the pages are still attached to the binding and are in their original order.

This sketchbook is known to have belonged to Henrietta as explained in correspondence between descendants. It was in the possession of Henrietta's grand-daughter Ruth Blom before it was donated to the State Herbarium of South Australia in the late 1990s. Maud Sinclair, Henrietta's daughter-in-law, wrote that "She [Ruth Blom] has a book of paintings of plants … It belonged to Bruce's mother' (Bruce was Henrietta's third son, Maud was his wife)".[71] This sketchbook was passed down through the Donald and Henrietta Sinclair (*née* Wehl) line of the family. In a letter from Ruth Blom to Philip Moors (filed letter at MEL), she wrote that she "drove to Adelaide where we looked at my Grandmother's sketch book of water colour paintings of wild flowers which grew near Lake Bonnie when she was a girl. She was then Henrietta Jane Wehl, and her mother was Clara, sister of Ferdinand v. M. The sketch book is nicely housed in Adelaide's new Herbarium". This sketchbook was included in a display about Dr Eduard and Clara Wehl at the Millicent Library in 1996 (Kristie Rowe, Millicent Library, pers. comm.).

Marie Wehl's fungi illustrations

> The 2 books from Mr Tisdall[72] are not by any means equal to those of Miss Wehl — and I hope we shall see some more of her drawings.[73]

The importance of fungi illustrations in taxonomy is exemplified by Marie's works that were made from living specimens. It is sometimes difficult to

70 "The name of the heath-myrtle, sent by you is *Calycothrix tetragona*; it grows also in the Murray desert".

71 Maud Sinclair to Gwen, 11 Dec. 1986 (Royal Botanic Gardens Victoria).

72 Tisdall, Henry Thomas Normanton (1836–1905): http://www.anbg.gov.au/biography/tisdale-henry.html [accessed: Apr. 2020].

73 M.Cooke to F. Mueller, 10 Apr. 1888 (Private hands).

Fig. 43. Specimen and illustration by Marie Wehl of *Lepiota clypeolaria* (Bull.) P.Kumm., as *Agaricus clypeolarius*; South Australia. Lake Bonney, *Miss Wehl 21*; MEL2367929. Reproduced with permission of the Royal Botanic Gardens Victoria.

gain knowledge of the form and colour of fungi species once they are dried specimens, especially in comparison to vascular plants where much of their form and even colour can be obtained, either in spirit collections or as reconstituted from dried specimens. The additional information to be found in illustrations that accompany herbarium specimens of fungi contributes substantially to the construction of adequate descriptions (May 1990; Maroske *et al.* 2018) (Figs 42–44). The fact that Marie's illustrations were copied and added to collections used in publications and distributed to fungi taxonomists clearly demonstrates this. The following sections provide a summary of how Marie's fungi illustrations were used by taxonomists and in publications.

Fig. 44. Specimen and illustration by Marie Wehl of *Coprinopsis cinerea* (Schaeff.) Redhead, Vilgalys & Monclavo, as *Coprinus macrorhizus*; South Australia. Lake Bonney, *Miss M. Wehl 1*; MEL2367924. Reproduced with permission of the Royal Botanic Gardens Victoria.

Colored drawings of Australian fungs, exhibited by Baron von Mueller K.C.M.G, M.D. F.R.S. 1888

In the late 1880s, Mueller was involved with organising botanically themed displays at the Centennial International Exhibition, Melbourne (1 August 1888 to 31 January 1889), and the Paris Exposition Universelle, France (6 May to 31 October 1889). At Melbourne, Mueller mounted a display of three albums. Although not specifically cited in the official catalogues (see Hutchinson 1888; Lake 1888), it is reasonable to conclude that one of the albums was the *Colored drawings of Australian fungs* prepared by Charles Walter under instruction from Mueller that contained illustrations of Australian fungi, including 36 species illustrated by Marie Wehl. This album is now housed in the Natural History Museum, London and was listed in a 1915 catalogue (British Museum 1915). In a report about the Melbourne Exhibition, it was stated that

> the specimen books exhibited by Baron von Mueller having been injured by drip from the roof are now enclosed in glazed cases. One of the volumes contains specimens of Victorian plants worthy of cultivation; another select ornamental plants from Western and Northern Australia, and they include many very beautiful shrubs as well as herbaceous plants. Everlasting flowers of the composite order are very numerous, those from Western Australia being particularly handsome. The third volume is very interesting to those who care for Cryptogenic botany, being occupied with drawings of Australian fungi, including about 100 species. One of the drawings represents *Pestalozzia uvicola*, a fungus infesting vine leaves in Queensland, on which it is developed in small black spots. Among other interesting species

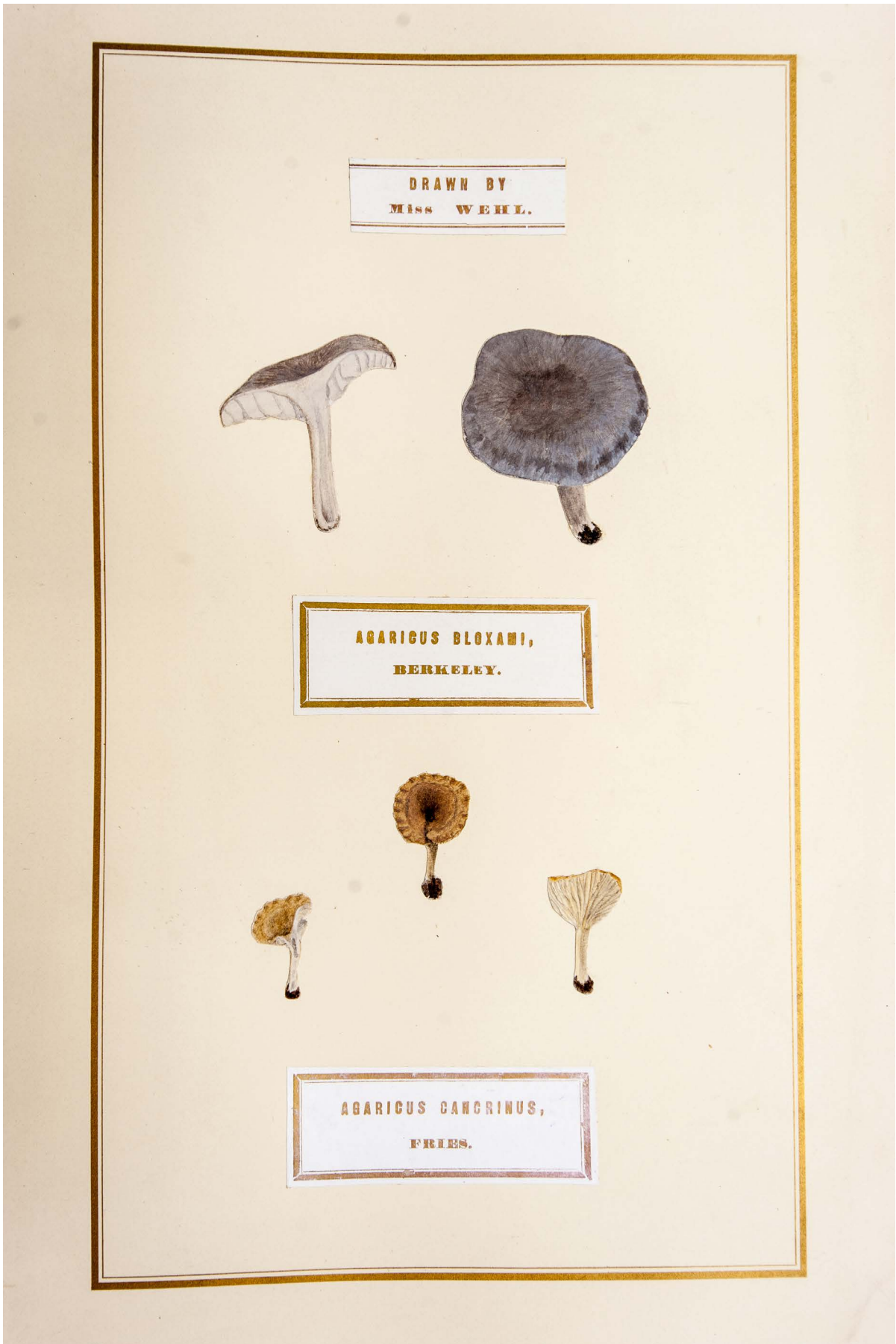

Fig. 45. Illustrations by Marie Wehl in *Colored drawings of Australian fungs*. **Upper** – *Entoloma bloxamii* (Berk. & Broome) Sacc., as *Agaricus bloxamii*; **Lower** – *Entoloma neglectum* (Lasch) Arnolds, as *Agaricus cancrinus*. With permission of the Natural History Museum, London.

Fig. 46. Illustrations by Marie Wehl in *Colored drawings of Australian fungs*. **Upper** – *Clitocybe gibba* (Pers.) P.Kumm, as *Agaricus infundibuliformis*; **Lower** – *Entoloma laeticolor* Sacc., as *Agaricus laeticolor*. With permission of the Natural History Museum, London.

Fig. 47. Illustrations by Marie Wehl in *Colored drawings of Australian fungs*. **Upper** – *Lepiota lavendulae* (Cooke & Massee) Sacc., as *Agaricus lavendulae*; **Lower** – *Melanoleuca melaleuca* (Pers.) Murrill., as *Agaricus melaleucus*. With permission of the Natural History Museum, London.

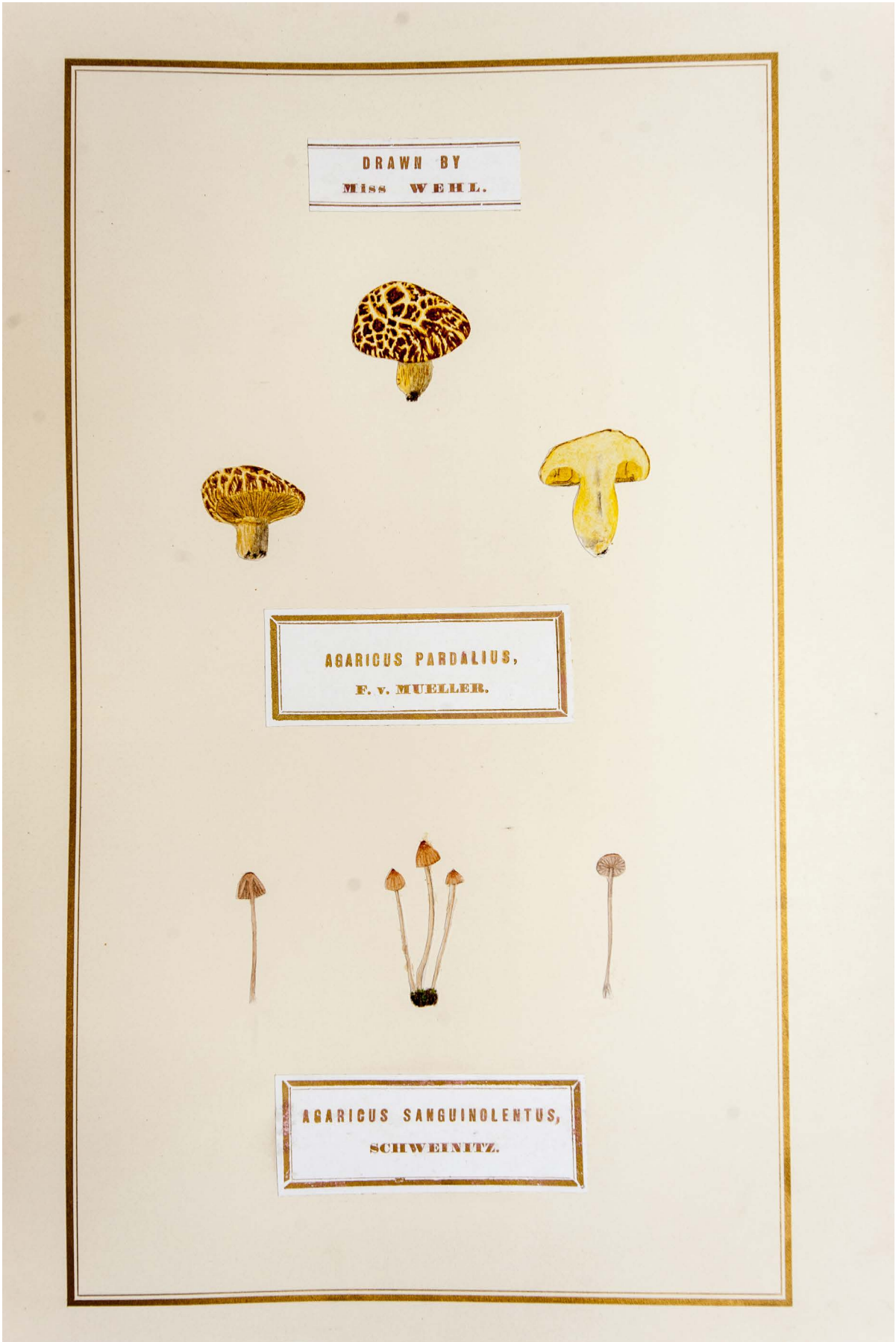

Fig. 48. Illustrations by Marie Wehl in *Colored drawings of Australian fungs*. **Upper** – *Agaricus pardalis* (F.Muell. manuscript name); **Lower** – *Mycena sanguinolenta* (Alb. & Schwein.) P.Kumm., as *Agaricus sanguinolentus*. With permission of the Natural History Museum, London.

Fig. 49. Illustrations by Marie Wehl of *Oudemansiella eradicata* (Kalchbr.) Zhu L.Yang, G.M.Muell., G.Kost & Rexer, as *Agaricus olivaceoalbus*; [No.] 3. MEL Library, RB MSS A54. Reproduced with permission of the Royal Botanic Gardens Victoria.

> is *Agaricus muscarius*, related to the true mushroom, and with which, it is said, the son of Peter the Great of Russia was poisoned.[74]

The two species specifically mentioned in the report are included in the album in the Natural History Museum and *Agaricus muscarius* is one of the illustrations that was "Drawn by Miss Wehl".

The album is bound with hard card covers with an embossed title. It contains 74 illustrations of Australian fungi. Of these, 36 are labelled as "Drawn by Miss Wehl". These have been pasted and arranged on 19 pages, with one to three species per page (Figs 45–48). Each species is labelled with the species name. The other fungi illustrators in the album include the English mycologist George Massee (12 illustrations copied from originals by Australian collectors), the Western Australian flower painter Margaret Forrest (as Mrs E. Forrest) (1844–1929) (15 illustrations) and the Victorian naturalist Charles French Jnr (1868–1950) (11 illustrations). Although displayed and catalogued as "Victorian fungi", Marie's illustrations were of species collected in the Lake Bonney area of South Australia. The second page of the album is subtitled as "Prepared under Direction of Baron von Mueller by Charles Walter, Swanston Street, Melbourne".

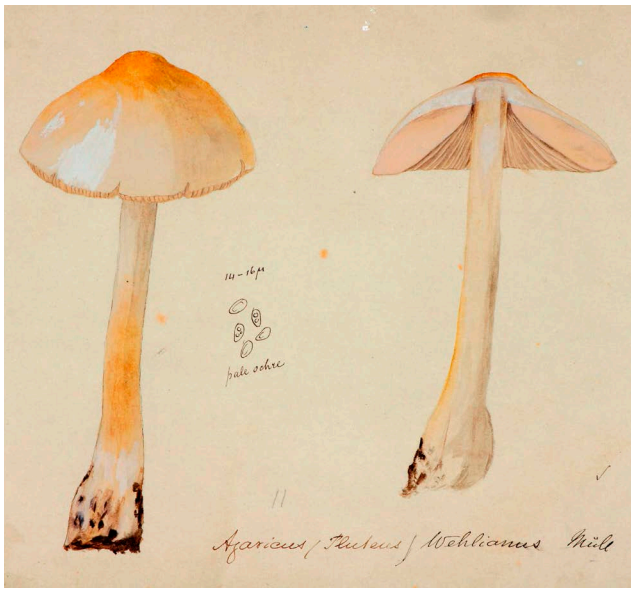

Fig. 50. Illustrations by Marie Wehl of *Pluteus wehlianus* (F.Muell. ex Cooke) Sacc., as *Agaricus wehlianus*; [No.] 11; MEL Library, RB MSS A54. Reproduced with permission of the Royal Botanic Gardens Victoria.

Charles Walter (1831–1907) had a long association with Mueller. He migrated from Germany to Victoria about 1856, and was employed by Mueller to collect plants in Victoria, South Australia and New South Wales. Walter's collections amount to almost 5000 specimens and are well represented in numerous herbaria. He was an assistant at Melbourne's Technological Museum and became head of the Economic Botany section in 1890, a position he held until his death in 1907. Apart from his botanical and scientific activities, he was a photographer and journalist and his progressiveness in these fields has led him to be referred to as Australia's first photojournalist (Maiden 1908b; Gandoger 1913, 1918, 1919; Orchard 1999; Lydon 2002; Gaskins 2008; George 2009).

As well as being exhibited at the Melbourne Centennial Exhibition, the album was exhibited in the Victorian Court in the Paris Exposition Universelle in 1889. Although the exposition was a showcase for the culture, products and industries of France and her colonies (Monod 1890), about 30 other countries and their colonies participated. Victoria was the only Australian colony that constructed a court. This was in the 'Colonies Anglaises' area that was within the 'Grande-Bretagne' precinct. South Australia and Tasmania were represented by minor displays within the Victorian Court, as well as stalls away from the court. After the Paris Exposition, the album was donated to the Natural History Museum, London. A hand-written note on the inside cover states: "Drawings of 74 species of fungi; Presented by the President of the Victorian Commission at the Paris Exhibition (Baron Ferd. von Mueller), 20 Jan. 1890. Paris Exposition Universelle, 1889, Massee (G.E.) & others; Crypt. Herb., with Eng. Bot. Drawings".

74 *Leader*, Horticultural notes, 6 Oct. 1888, p. 14.

Fungi illustrations displayed at the Field Naturalists' Club of Victoria, 1889

Apart from the exhibitions outlined above, only one other record exists of a public display of Marie's fungi illustrations. This was a display at the monthly meeting of the Field Naturalists' Club of Victoria held 9 September 1889 at the Royal Society Hall. There was no account of the number of illustrations or the species illustrated. This display was concurrent with the display at the Paris Exposition Universelle of 1889, so it is assumed that the Field Naturalists' Club display included additional species to those included in the album that was exhibited at Paris, considering that Marie only ever did, in most instances, a single painting of any one particular species. It is likely that the illustrations exhibited at the Field Naturalists' Club of Victoria were some or all of the original paintings of 25 species that are now held at Royal Botanic Gardens Victoria.

At least some of the original fungi paintings by Marie Wehl in MEL are depicted several to a sheet (Fig. 51) and some of the MEL illustrations appear to have been cut from larger sheets, due to irregular edges (Figs 42, 43). In the case of the Natural History Museum album, individual sporing bodies or groups of sporing bodies are cut out very close to the edges of the fungi that are depicted (Figs 45–48). Reconstructing the material at hand, it seems that the originals are all either at MEL or in the album in the Natural History Museum. Furthermore, all the illustrations in the album are from the second batch of collections reported by Mueller (1889b) (the B series of numbers in Appendix 2). There is only one species for which there is an illustration in both MEL and the album, *Agaricus spissus* (now *Amanita excelsa*). However, the illustration labelled as *Agaricus spissus* in the Natural History Museum album is consistent with a delicate *Mycena* rather than a robust *Amanita*, and seems to be a mislabelling for *Agaricus speireus* (now *Mycena speirea*), another species collected by Marie Wehl, of which there is no illustration in MEL.

Fungi illustrations in the herbaria and libraries at Kew and Melbourne

There are a number of illustrations of fungi associated with Marie in the Library, Art, and Archives, Royal Botanic Gardens Kew, and the Royal Botanic Gardens Victoria. There are two distinct groups of illustrations, including the originals presently held in MEL and copies of them held in both MEL and K(M). The original illustrations are attributed to Marie based on correspondence and research (May *et al.* 1995).[75] Contrary to some catalogue entries and some taxonomic works (see Pegler 1965), there are no originals of Marie's illustrations held at K, only copies presumably by Cooke.

Compared to the flower illustrations that were mostly retained by the sisters in their personal albums, Marie's fungi illustrations underwent a different progression. These were forwarded, together with the pressed and dried fungi specimens, to Mueller in Melbourne. From there, the specimens and illustrations were despatched to Cooke at Kew (English 1987). Cooke reported in correspondence to Mueller that he had "copied some of the drawings but have kept none. All have been sent back".[76] These originals are now conserved either in the album in the Natural History Museum or at MEL as either loose illustrations in the library (Figs 49–51) or within the herbarium cabinets (Figs 42–44). Cooke habitually had copies made of fungi illustrations that he came across (English 1987). The set of copies of Marie's illustrations are held in the Kew mycology herbarium collection (K(M); Figs 52, 53). A few other copies by an unknown illustrator are held in MEL (Figs 54, 55). For the copies at K(M), the original Wehl collection numbers are recorded. It is most likely that Cooke did the copies himself. The copies that are in K(M) are distinctive in that the page is framed by a single-line outline, and each has a printed label in the lower section that reads: "Drawings from the collection of Dr. M.C. Cooke. Presented by the Bentham Trustees, June 1911". The copies are individually pasted onto a standard herbarium sheet, and the printed label is in most cases pasted below directly on to the herbarium sheet. The copies in MEL are on plain pages without a lined border, and only have the name of the fungus in hand script. There are no distinguishing notes or references to the original illustrations. There is no record of who did the copies in MEL or why they were done. The copies can be further distinguished by their overall poor quality and lack of detail when compared to Marie's originals.

Fungi illustrations in the *Handbook of Australian Fungi*

In his *Handbook of Australian fungi*, Cooke (1892) noted that "a continued stream of specimens have been sent over for determination" but that "much more rarely have they been accompanied by any notes or figures. Exceptions must be made in favour of some drawings by Miss Wehl, Mrs Martin,[77] Mr Tisdall, and some rough sketches by Bailey".[78] Cooke is reported to have discarded about 90% of the specimens that he received in connection with the *Handbook* because of deterioration and that he based his descriptions on very few specimens and the illustrations and descriptions supplied by the collectors (English 1987). Cooke's *Handbook* is considered by modern mycologists as inaccurate and too brief, and is mainly of historical interest.

75 Meta Stenhouse to Margaret Willis, 9 Sep. 1942 (Mueller Correspondence, RBGV).

76 M. Cooke to F. Mueller, 10 Apr. 1888 (Mueller Correspondence, RBGV).

77 Martin, Flora Mary (1845–1923): http://www.anbg.gov.au/biography/campbell-flora-mary.html [accessed: Apr. 2020].

78 Frederick Manson Bailey.

Fig. 51. Illustrations by Marie Wehl. **Left upper** – Unidentified species, 'immature'; [No.] 5; **Right upper** – *Panaeolina foenisecii* (Pers.) Maire, as *Agaricus foenisecii*; [No.] 8; **Lower** – *Hohenbuehelia carbonaria* (Cooke & Massee) Pegler, as *Panus carbonarius*; [No.] 6. MEL Library, RB MSS A54. Reproduced with permission of the Royal Botanic Gardens Victoria.

Cooke illustrated his *Handbook* with composite plates of grouped individual figures based on original watercolours made by the collectors in Australia. Seven of the individual illustrations were based on Marie's original illustrations (Figs 56–58). Cooke did not acknowledge the source of any of the originals that were copied.

It appears that the professional relationship between Mueller and Cooke may have been somewhat strained. Mueller reported that Cooke failed to acknowledge his role in encouraging collectors to supply fungi specimens to the Melbourne herbarium. These in turn were dispatched to Cooke at Kew. Mueller wrote in a letter to Thiselton-Dyer at Kew that "anyone, who sent to me fungs would through this long series of years have done so, had it not been for my special inspiration, omitting my name would make it appear, as if all these fungs had gone from the collectors direct to Dr Cooke. I have treated that gentleman with every consideration".[79] While Mueller served as government botanist of Victoria for the rest of his life, he was removed as Director of the Melbourne Botanic Garden in 1873, and thereafter felt vulnerable in his remaining position. Obsessed with maintaining his public reputation as a bulwark against threats of removal, he repeatedly raised the matter of recognition with colleagues. As most would have been unaware of the uncertainty of his tenure, they undoubtedly found his requests irritating or embarrassing (Cohn & Maroske 1996).

Copies of fungi illustrations interleaved in the *Handbook of Australian Fungi*

A copy of Cooke's *Handbook of Australian Fungi* held at the Victorian Government Library Service, Knowledge Resource Centre in Werribee,[80] contains a number of illustrations that are copies of Marie Wehl's original illustrations (see Appendix 2). This copy of the *Handbook*

79 F. Mueller to W. Thiselton-Dyer, 1 July 1891 (Mueller Correspondence, RBGV).

80 Catalogue number: 37.10.4 COO.

Fig. 52. Copy of *Hohenbuehelia carbonaria* (Cooke & Massee) Pegler presumably by M.C. Cooke, '*Panus carbonarius* C & M, Lake Bonney N E of S Australia, on places where ferns were burnt, Wehl No. 6, Australia 3, Sacc. Supp 326. Drawings from the collection of Dr M.C. Cooke. Presented by The Bentham Trustees, June, 1911'. This is a copy of the original held at Royal Botanic Gardens Victoria, see Fig. 51. Reproduced with permission of the Royal Botanic Gardens Kew.

Fig. 53. Copy of *Cantharellus politus* Cooke & Massee presumably by M.C. Cooke from an original by Marie Wehl in *Colored drawings of Australian fungs*, '*Cantharellus politus* Cke & Mass, on the ground, nr Melbourne 1887, 4/21*, viscid shining, Australia, Wehl No. 27, Sacc. Supp. 267. Drawings from the collection of Dr M.C. Cooke. Presented by The Bentham Trustees, June, 1911'. Also includes an image on lower left of *Cantharellus politus* cut out from Plate 6, fig. 43 in *Handbook of Australian Fungi*, M.C. Cooke (1892). Reproduced with permission of the Royal Botanic Gardens Kew.

Fig. 54. Illustration by Marie Wehl of *Inocybe crassipes* (Cooke & Massee) Pegler, as *Agaricus ozes* var. *crassipes*; '[No.] 22, stem & pileus striate'; MEL Library, RB MSS A54. Reproduced with permission of the Royal Botanic Gardens Victoria.

Fig. 55. Copy of *Inocybe crassipes* (Cooke & Massee) Pegler as *Agaricus ozes* var. *crassipes*, by an unknown illustrator; 'stem & pileus striate'. This is a copy of the original in the Royal Botanic Gardens Victoria (see Fig. 54). MEL Library, RB MSS A54. Reproduced with permission of the Royal Botanic Gardens Victoria.

has been bound with an extra 97 colour plates (24 cm), 80 interleaved and 17 bound in after page 457. These extra plates are hand drawn and labelled. The interleaved plates are numbered to match corresponding entries in the text on the facing page or nearby, or are species described later, inserted at the appropriate place in the taxonomic arrangement. There are also a few illustrations of species not included in the *Handbook* (the names of some of these are *nomina nuda*). The interleaved pages are original art work and do not match any of the illustrations based on Wehl material in the plates published in the *Handbook*. Four of the illustrations are copies of Marie Wehl originals held in the album in the Natural History Museum (*Boletus australis*, *Collybia veluticeps*, *Entoloma laeticolor* and *E. melaniceps* – except for *C. veluticeps*, these are represented by copies at K); two are copies of originals held in MEL, *C. ozes* var. *crassipes* (Fig. 59) and *Hebeloma olida*, the latter also represented by a copy at K. A seventh page illustrates *Flammula limonea* (Fig. 60), but no Marie Wehl original has been located of this species. Handwriting on the paintings is consistent with that of Cooke. The style and layout of the paintings matches very closely to the Kew copies, and the paintings are assumed to have been done by Cooke.

Two of the illustrated species are indicated as coming from "Lake Bonney NE of S Australia". There are two locations in South Australia named Lake Bonney, one in the Millicent district, referred to as Lake Bonney SE, and the other near the Murray, referred to as Lake Bonney Riverland, Barmera. Despite Cooke's indication of 'NE', the location Marie Wehl collected at is certainly the Lake Bonney in the south-east of South Australia, near Millicent, which is known to Indigenous people as Canunda or Coonunda.

This copy of Cooke's *Handbook* was previously held in the library of the Victorian Department of Agriculture, one of the libraries subsumed into the general Victorian public service library now at Werribee. The volume was consulted in the 1980s by one of us (TWM) in the library of the Victorian Plant Research Institute, Burnley (an institute of the Department of Agriculture). Cooke sold his personal library around 1898 through the bookseller Wheldon's, who issued a catalogue (English 1987). It is likely that Daniel McAlpine, a pioneer plant pathologist who was appointed to the Victorian Department of Agriculture in 1890, purchased the work at this time. McAlpine would have been well aware of the importance of Cooke's contributions to knowledge of Australian fungi because he had recently compiled a *Systematic arrangement of Australian Fungi* (McAlpine 1895).

Fig. 56. Illustrations in Plate 2, *Handbook of Australian Fungi*, M.C. Cooke (1892). Fig. 7, *Oudemansiella eradicata* (Kalchbr.) Zhu L.Yang, G.M.Muell., G.Kost & Rexer, as *Agaricus olivaceoalbus*, is redrawn from Marie Wehl's original illustration in Royal Botanic Gardens Victoria (see Fig. 49). Fig. 10, *Pleurotus australis* Sacc., as *Agaricus australis*, is redrawn from Marie Wehl's original illustration in Royal Botanic Gardens Victoria. Sourced from BHL.

Fig. 57. *Hohenbuehelia carbonaria* (Cooke & Massee) Pegler, as *Panus carbonarius*, Plate 7, fig. 46 in *Handbook of Australian Fungi*, M.C. Cooke (1892), redrawn from Marie Wehl's original illustration in Royal Botanic Gardens Victoria (see Fig. 51) and see Fig. 52 for a copy in Royal Botanic Gardens Kew. Sourced from BHL.

Fig. 58. *Pluteus wehlianus* (F.Muell. ex Cooke) Sacc., as *Agaricus wehlianus*, Plate 3, fig. 13 in *Handbook of Australian Fungi*, M.C. Cooke (1892) redrawn from Marie Wehl's original illustration in Royal Botanic Gardens Victoria, see Fig. 50. Sourced from BHL.

Fig. 59. Copy of *Inocybe crassipes* (Cooke & Massee) Pegler, as *Collybia ozes* var. *crassipes* (as *crassipeda*), presumably by M.C. Cooke from *Handbook of Australian Fungi*, M.C. Cooke (1892), interleaved with copies of fungi illustrations, Victorian Government Library Service, Knowledge Resource Centre, Werribee. This is a copy of the original illustration by Marie Wehl number 22 held at Royal Botanic Gardens Victoria (see Fig. 54). See also Fig. 55 for another copy by an unknown illustrator.

Fig. 60. Copy of *Agrocybe limonia* Pegler, as *Flammula limonia*, presumably by M.C. Cooke, from *Handbook of Australian Fungi*, M.C. Cooke (1892), interleaved with copies of fungi illustrations, Victorian Government Library Service, Knowledge Resource Centre, Werribee. The original illustration by Marie Wehl of *Agaricus limonius* Cooke & Massee has not been located.

Fig. 61. Ceramic ware decorated with Wehl flower illustrations, by Samantha Robinson, Sydney. Photo by J.L. Dowe.

Contemporary use of illustrations

Apart from Cooke's *Handbook*, Marie's fungi illustrations have been reproduced in three recent publications: in a biographical paper in which two illustrations were reproduced (May *et al.* 1995); by Petersen (2008), in which the illustration of *Agaricus olivaceo-albus* at K was reproduced; and in Olsen's (2013) biographies of female plant collectors and illustrators associated with Mueller, in which two pages of illustrations were reproduced. In recent years, Wehl flower illustrations have been incorporated in the decoration of a series of ceramics produced by Samantha Robinson, Sydney. The items include vases, bowls, jugs and tumblers (Fig. 61).[81]

Marie Wehl after South Australia

Primarily for her own interest, Marie continued painting after she had moved to Queensland in about 1906. Whilst residing in Toowoomba she wrote that she had "sold a few paintings and will take pupils if I can get them".[82] In a letter to her aunt Mathilde Dankoler in July 1911 whilst she was living at Meteor Downs, near Springsure, she wrote that "I get time to do a little painting of which I am very fond, also fancy work".[83] At least two landscape water colours are known from this latter period. Both are of bush huts in a pastoral setting with sheep and eucalypts in an unknown location. These watercolours were passed down through the Henry and Helene Wehl line of the family, and are in the possession of descendants. Later in 1948, Marie's wildflower illustrations were mentioned in a letter from Henrietta to Jim Willis in which she wrote that she was "hoping to see the wildflowers before I leave [Western Australia], they are budding now – my sister here [Marie moved to Western Australia in about 1923] has painted specimens of wildflowers beautifully. It was a pleasure to see her work again".[84]

The ceramic work of Henrietta Wehl

Henrietta's interest in pottery and ceramics appears to have been prompted by her association with potter Mary McDonald, with whom she was residing at Milton, Brisbane, in the late 1920s (QAG 2014). In 1930, she formally enrolled at Brisbane's Central Technical College where the pottery and ceramics classes were being taught by the influential potter L.J. Harvey. The following year, 1931, she exhibited 13 pieces with the Society of Arts and Crafts of New South Wales in Sydney (Timms 1986; DAAO 2019). Photographs of these works demonstrate the full range of Harvey's teaching methods (Cooke 1983a; Fahy *et al.* 2004). One of these works, a slab built vase dated 1930, was acquired by the Museum of Applied Arts and Sciences, Ultimo, Sydney (now known as the Powerhouse Museum), from this exhibition. She exhibited 37 items at this venue in the years 1932–39. Other works have been acquired by the Queensland Art Gallery (Cooke 1983b; QAG 2014). Her works were fired at Fowler's Pottery, Marrickville (DAAO 2019). She returned to Queensland on several occasions to complete some works, as one double scraffito vase, dated 1938, was marked with a 'Q'. She also produced some works that were independent of the Harvey School styles, such as the Lyre-bird vase (Fig. 62) in the Queensland Art Gallery collection

81 samantharobinson.com.au/collections/all [accessed: Oct. 2019].

82 Marie Wehl to Harry Dankoler, 26 Aug. 1906 (Royal Botanic Gardens Victoria).

83 Marie Wehl to Mathilde Dankoler, 31 July 1911 (Royal Botanic Gardens Victoria).

84 Henrietta Sinclair to Jim Willis, 9 Aug. 1948 (Royal Botanic Gardens Victoria).

Fig. 62. Pottery of Henrietta Sinclair (*née* Wehl). Queensland Art Gallery: Lyre-bird vase 1934; earthenware, slab and hand built in the shape of a lyre with rust red glaze and painted on two sides with lyrebirds in bushland settings in polychrome underglaze; 22.8 cm × 16.5 cm × 10.8 cm; Acc. 1983.045.001; Gift of Ruth E. Blom 1983. Photo by J.L. Dowe.

(QAG 2014). Her last pieces, dated 1945, were made with clay that was found when a bore was excavated at Barngo, the property near Capella owned by her son Stuart Monteith Sinclair and daughter Ethelyn Mueller Russell (*née* Sinclair) (DAAO 2019).

Eponymy

The Wehls have been eponymously commemorated in the names of three taxa. The marine alga *Gigartina wehliae* Sond. was named for Clara Wehl by Sonder (1871) and placed in Cryptonemiaceae. It is now placed in Gigartinaceae (Table 2). *Gigartina wehliae* remains the currently used name for the species. An illustration drawn from Clara Wehl's specimen accompanied Sonder's protologue (Fig. 63). AANI (2020) list Clara's collection as the holotype.[85] However, there is a duplicate of this collection in Lund (LD). Furthermore, more than one specimen was cited in the protologue[86] and therefore a lectotype will have to be designated.

The plant genus *Wehlia* F.Muell. was established by Mueller (1876b) to honour the joint contribution to botany of Eduard and Clara Wehl shortly after the former's death. Two species were described at the time that Mueller established the genus, *W. thryptomenoides* F.Muell. [= *Homalocalyx thryptomenoides* (F.Muell.) Craven] (Fig. 64) and *W. coarctata* F.Muell. [= *H. coarctatus* (F.Muell.) Craven] (Fig. 65). The dedication, originally in Latin, was included in the generic description, and translates as "dedicated to my recently deceased brother-in-law Edward Wehl, MD, and my beloved sister Clara Wehl, in recognition of their contribution to the study of plants". The type specimens of the two original species were all collected by Jess Young in Western Australia in 1875; those of *H. thryptomenoides* from Victoria Springs and Ularing,[87] and that of *H. coarctata* from Mt Churchman.[88] The genus was placed in synonymy under *Homalocalyx* F.Muell. by Craven (1987) and all species in the former *Wehlia* are now referable to that genus. *Homalocalyx* is an endemic genus of eleven species with most found in Western Australia.

The fungus *Agaricus wehlianus* F.Muell. ex Cooke (Pluteaceae) was named to commemorate Marie Wehl by Mueller (Cooke 1887a). The type citation (Table 2) indicated that the original collection was made by Marie and there was an illustration with the specimen. This illustration is in MEL (Fig. 50), and was used as the basis for a figure in Cooke's *Handbook of Australian Fungi* (Cooke 1892) (Fig. 58). The type specimen, a collection from Lake Bonney, is however in K(M). The currently accepted name for the species is *Pluteus wehlianus* (F.Muell. ex Cooke) Sacc. with this combination having been published by Saccardo (1887).

Another name, *Trichinium wehlianum* F.Muell., was published by Mueller (1853b) without a description, being a name included in a list of four *Trichinium* species under Amaranthaceae. APC (2020) has *Trichinium* as a synonym of *Ptilotus*, but otherwise *T. wehlianum* is a *nomen nudum* and not accepted according to the rules of botanical nomenclature; it is currently not applied to any known species. Therefore, strictly speaking, it is not an eponym.

Conclusion

> You and those also there now dear to you can promote much my researches for the geography of the plants of all Australia by inducing their friends towards the central regions to collect also any species, even the smallest, occurring near their domiciles. In summer the fruiting and even shrivelled specimens so long as still seeds are on them, will be as acceptable as the flowering

85 MEL652140.

86 The relevant specimens cited in the protologue of *Gigartina wehliae* included, amongst others: 'Hab. M'Donnell Bay, Mrs Wehl; Port Phillip Heads, Dr. F. v. Müller'.

87 lecto: MEL545048; syn: MEL545034; syn: K000821960.

88 holo: MEL545049; iso: K000821954.

Fig. 63. Illustration of *Gigartina wehliae* Sond., Plate 4 in *Die algen des tropischen Australiens* (Sonder 1871). Source BHL.

> samples obtained in spring. As the holy scripture teaches "You shall know them by their fruits".[89]

In overall importance, the contribution of the Wehl family to Australian botany is relatively modest, although their familial connection to Australia's most significant botanist of the nineteenth century places them in a unique and historically notable position (Dowe *et al.* 2020). Mueller maintained a diverse cohort of botanical collectors, and the Wehl family's contribution, for the most part, was similar to other collectors living in remote areas. For the fungal collections, the quality of the accompanying illustrations by Marie Wehl make the collections particularly useful. However, these illustrations have rarely been utilised for interpreting taxa based on her collections.

The Wehl botanical collections and flower illustrations provide a rudimentary and unintentional floristic account of the Lake Bonney and Mt Gambier areas in south-east South Australia, and represent a partial record of the floristic composition that existed at that time (unpublished data). Comparing plant lists of the Wehl specimens and illustrations with contemporary plant lists of the Lake Bonney area indicates that a profound change has occurred in floristic composition in the area. The impacts of pastoralism, urbanisation, industrial activities, forestry and geophysical alterations through wide-scale drainage programs, are the primary drivers of the changes. The Wehl herbarium collections and illustrations also provide a glimpse into the lives of an immigrant German pastoral family in the latter half of the nineteenth century in South Australia, where it was an expectation that they would have a practical and

89 F. Mueller to Louise Wehl, 25 Oct. 1887 (Mueller Correspondence, RBGV).

Fig. 64. *Homalocalyx thryptomenoides* (F.Muell.) Craven [syn. *Wehlia thryptomenoides* F.Muell.], Goldfields Woodlands National Park, Sep. 2012. Photo by Hazel E. Dempster.

Fig. 65. *Homalocalyx coarctatus* (F.Muell.) Craven [syn. *Wehlia coarctata* F.Muell.], north of Merredin, Western Australia, 2007. Photo by Jim Barrow.

intellectual interest in botany, ornamental gardening and natural history.

The association between the Wehl botanical specimens and their illustrations provides an insight into the practical means by which the Wehl sisters went about illustrating flowers and fungi. Many plant and fungal specimens were the actual subjects which, when pressed and dried, were sent to Mueller who then incorporated them into his herbarium in Melbourne. A number of illustrations depict the same subject from two different views, evidence that the sisters often sat together to do their illustrations, one on each side of the table. This suggests that collecting and illustrating plants were family activities engaged in for relaxation and social reasons. Although the sisters were self-taught it was a family expectation that they would take part in feminine inclined 'nature studies' as both an intellectual as well as an artistic pursuit.

The role of amateur botanical collectors is exemplified in the contribution made by the Wehl family, particularly with respect to their relationship and interaction with their 'Dear Uncle' Baron Ferdinand von Mueller.

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Appendix 1. Illustrations of flowering plants by Marie Wehl and Henrietta Wehl, primarily from the Lake Bonney and Mount Gambier areas, South Australia. Species have been identified through herbarium records, flora treatments and expert advice. Current nomenclature follows the Australian Plant Census (APC 2020). Words in square brackets are author comments or additions. The *Blue Jay Sketchbook* (**BJS**) and the *Large Sketchbook* (**LS**) are held in the library at the Royal Botanic Gardens Victoria, and the *Plain-cover Sketchbook* (**PCS**) is held in the library at Adelaide Botanic Garden. Figures cited after the species name refer to figures in the main text of the accompanying article.

Species (Current name)	Artist: location of work	Related herbarium specimens
Acacia oxycedrus Sieber ex DC.	Marie Wehl: LS, p. 1	South Australia. Lake Bonney, 1888, *Mrs Wehl 14*: MEL0580775
Acacia verticillata (L'Her.) Willd.	Henrietta Wehl: PCS, p. 22	No relevant Wehl collections
Acrotriche serrulata R.Br.	Henrietta Wehl: PCS, p. 31	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 11*: MEL0089335
Ajuga australis R.Br.	Marie Wehl: PCS, p. 52	No relevant Wehl collections
Apium prostratum Labill. ex Vent. (Fig. 7)	(1) Marie Wehl: BJS, p. 34 (2) Henrietta Wehl: PCS, p. 14a	No relevant Wehl collections
Arachnorchis cardiochilus (Tate) D.L.Jones & M.A.Clem.	Marie Wehl: PCS, p. 47 (lower)	Mt Gambier, undated, *C.C.M.Wehl s.n.*: MEL0712458 [as *Caladenia cardiochila* Tate]
Arachnorchis dilatata (R.Br.) D.L.Jones & M.A.Clem.	Marie Wehl: PCS, p. 47	No relevant Wehl collections
Arachnorchis formosa (G.W.Carr) D.L.Jones & M.A.Clem. (Figs 32, 40)	(1) Marie Wehl: PCS, p. 41 (2) Marie Wehl: LS, p. 8	No relevant Wehl collections
Arachnorchis fragrantissima (D.L.Jones & G.W.Carr) D.L.Jones & M.A.Clem. (Fig. 40)	(1) Marie Wehl: PCS, p. 41 (2) Marie Wehl: PCS, p. 48	No relevant Wehl collections
Arachnorchis parva (G.W.Carr) D.L.Jones & M.A.Clem.	Marie Wehl: PCS, p. 48	No relevant Wehl collections
Arachnorchis sp. (Fig. 31)	(1) Henrietta Wehl: PCS, p. 18 (2) Marie Wehl: LS, p. 6	No relevant Wehl collections
Arachnorchis tentaculata (Schltdl.) D.L.Jones & M.A.Clem. (Figs 32, 40)	(1) Marie Wehl: PCS, p. 41 (2) Marie Wehl: LS, p. 8	No relevant Wehl collections
Arachnorchis versicolor (G.W.Carr) D.L.Jones & M.A.Clem.	Henrietta Wehl: PCS, p. 32	South Australia. Mt Gambier, undated, *C.C.M. Wehl s.n.*: MEL2149882
Arthropodium strictum R.Br.	Henrietta Wehl: PCS, p. 12	No relevant Wehl collections
Asperula conferta Hook.f. (Fig. 23)	(1) Marie Wehl: BJS, p. 3 (2) Henrietta Wehl: PCS, p. 7	South Australia. Lake Bonney, 1888, *Mrs Wehl 15*: MEL0224925
Astroloma conostephioides (Sond.) F.Muell. ex Benth.	Marie Wehl: LS, p. 12	No relevant Wehl collections
Astroloma humifusum (Cav.) R.Br. (Fig. 37)	(1) Marie Wehl: BJS, p. 33 (2) Henrietta Wehl: PCS, p. 16	South Australia. Lake Bonney, 1887, *Miss Wehl 9*: MEL1549404
Billardiera cymosa F.Muell. (Fig. 24)	(1) Marie Wehl: BJS, p. 9 (2) Henrietta Wehl: PCS, p. 42 (3) Marie Wehl: LS, p. 12	South Australia. Lake Bonney, [October] 1890, *E.Wehl 12*: MEL0065398
Boronia coerulescens F.Muell.	(1) Henrietta Wehl: PCS, p. 37 (2) Henrietta Wehl: PCS, p. 44	No relevant Wehl collections
Boronia filifolia F.Muell. (Fig. 31)	Marie Wehl: LS, p. 6	No relevant Wehl collections
Bossiaea cinerea R.Br. (Fig. 33)	(1) Henrietta Wehl: PCS, p. 29 (2) Marie Wehl: LS, p. 2	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 12*: MEL1529298
Brachyscome exilis Sond. (Fig. 36)	(1) Marie Wehl: BJS, p. 29 (2) Henrietta Wehl: PCS, p. 3	South Australia. Lake Bonney, [November] 1887, *C.C.M Wehl 9*: MEL0220752
Brachyscome graminea (Labill.) F.Muell.	Henrietta Wehl: PCS, p. 15	No relevant Wehl collections
Brachyscome sp.	Marie Wehl: BJS, p. 28	South Australia. Lake Bonney, 1887, *C.C.M Wehl 9*: MEL0220752
Brunonia australis Sm. ex R.Br.	(1) Marie Wehl: BJS, p. 32 (2) Henrietta Wehl: PCS, p. 5a (3) Marie Wehl: LS, p. 12	South Australia. Near Lake Bonney, 1887, *H.Wehl 13*: MEL2254348

Species (Current name)	Artist: location of work	Related herbarium specimens
Burchardia umbellata R.Br.	Marie Wehl: PCS, p. 52	South Australia. Lake Bonney, 1882, *C.C.M.Wehl s.n.*: MEL2211318
Caladenia carnea R.Br. (Fig. 34)	(1) Henrietta Wehl: PCS, p. 32 (2) Marie Wehl: LS, p. 3	South Australia. Mt Gambier, undated, *C.C.M.Wehl s.n.*: MEL1619145
Caladenia patersonii R.Br.	Henrietta Wehl: PCS, p. 32	South Australia. Mt Gambier, undated, *C.C.M. Wehl, s.n.*: MEL2149882
Caladenia latifolia R.Br. (Fig. 34)	(1) Marie Wehl: PCS, p. 51 (2) Marie Wehl: PCS, p. 51a (3) Marie Wehl: LS, p. 3 (pink form) (4) Marie Wehl: LS, p. 3 (albino form)	No relevant Wehl collections
Caladenia moschata (D.L. Jones) G.N. Backh. (Fig. 29)	Marie Wehl: LS, p. 4	No relevant Wehl collections
Caladenia sp.	Marie Wehl: PCS, p. 48	No relevant Wehl collections
Calystegia sepium (L.) R.Br.	Henrietta Wehl: PCS, p. 12a	South Australia. Lake Bonney, 1887, *H.Wehl 20*: MEL2272127
Calytrix tetragona (Labill.) F.Muell. (Fig. 39)	Henrietta Wehl: PCS, p. 9	South Australia. Lake Bonney, 1889, *Miss E. Wehl s.n.*: MEL0086294
Carpobrotus rossii (Haw.) Schwantes	Marie Wehl: BJS, p. 26	No relevant Wehl collections
Chamaescilla corymbosa (R.Br.) Benth.	Marie Wehl: BJS, p. 33	No relevant Wehl collections
Chrysocephalum apiculatum (Labill.) Steetz	Marie Wehl: BJS, p. 11	No relevant Wehl collections
Comesperma polygaloides F.Muell.	Henrietta Wehl: PCS, p. 13	No relevant Wehl collections
Comesperma volubile Labill. (Fig. 27)	(1) Marie Wehl: BJS, p. 12 (2) Henrietta Wehl: PCS, p. 38	No relevant Wehl collections
Convolvulus erubescens Sims	(1) Marie Wehl: BJS, p. 25 (2) Henrietta Wehl: PCS, p. 12a	No relevant Wehl collections
Correa reflexa var. *speciosa* (Don ex Andrews) Paul G. Wilson (Fig. 20)	(1) Marie Wehl: BJS, p. 7 (2) Henrietta Wehl: PCS, p. 20 (3) Marie Wehl: PCS, p. 60 (4) Marie Wehl: LS, p. 12	No relevant Wehl collections
Corybas diemenicus (Lindl.) Rchb.f (Fig. 21)	Marie Wehl: BJS, p. 15	South Australia. Lake Bonney, [July] 1887, *Mrs Dr Wehl s.n.*; MEL0614249
Corybas pruinosus (R.Cunn.) Rchb.f.	Henrietta Wehl: PCS, p. 23	No relevant Wehl collections
Craspedia richea Cass.	Henrietta Wehl: PCS, p. 5a	No relevant Wehl collections
Cynoglossum australe R.Br. (Figs 28, 39)	(1) Marie Wehl: BJS, p. 24 (2) Henrietta Wehl: PCS, p. 9	South Australia. Lake Bonney, 1882, *E.Wehl s.n.*: MEL0655393
Cynoglossum suaveolens R.Br.	Henrietta Wehl: PCS, p. 7	South Australia. Lake Bonney, 1882, *E. Wehl s.n.*: MEL0655393
Cyrtostylis reniformis R.Br. (Fig. 21)	(1) Marie Wehl: BJS, p. 15 (2) Henrietta Wehl: PCS, p. 23	No relevant Wehl collections
Darwinia micropetala (F.Muell.) Benth.	(1) Marie Wehl: BJS, p. 8 (2) Marie Wehl: PCS, p. 28	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 9*: MEL0220064
Daviesia ulicifolia Andrews (Fig. 30)	(1) Henrietta Wehl: PCS, p. 35 (2) Marie Wehl: LS, p. 7	South Australia. Lake Bonney,1890, *E.Wehl 6*: MEL0080968
Dianella revoluta R.Br. (Fig. 19)	(1) Marie Wehl: BJS, p. 31 (2) Henrietta Wehl: PCS, p. 5	No relevant Wehl collections
Diplodium robustum (R.S. Rogers) D.L.Jones & M.A.Clem.	Marie Wehl: BJS, p. 21	No relevant Wehl collections
Diplodium sp.	Henrietta Wehl: PCS, p. 5	No relevant Wehl collections
Dipodium pardalinum D.L.Jones (Fig. 27)	Marie Wehl: BJS, p. 12	South Australia. Lake Bonney, [3 January] 1887, *H.Wehl 25*: MEL669706
Diuris chryseopsis D.L.Jones (Fig. 30)	Marie Wehl: LS, p. 7	South Australia. 1882, *C.C.M.Wehl s.n.*: MEL1542676

Species (Current name)	Artist: location of work	Related herbarium specimens
Diuris orientis D.L.Jones (Fig. 25)	(1) Marie Wehl: BJS, p. 4	South Australia. Near Lake Bonney, 1890, *E.Wehl 16*: MEL1542881
Diuris palustris Lindl.	Henrietta Wehl: PCS, p. 23	No relevant Wehl collections
Diuris pardina Lindl.	Marie Wehl: PCS, p. 51a	No relevant Wehl collections
Diuris sulphurea R.Br. (Fig. 29)	(1) Henrietta Wehl: PCS, p. 34 (2) Marie Wehl: LS, p. 4	No relevant Wehl collections
Drosera auriculata Backh. ex Planchon	Henrietta Wehl: PCS, p. 30	No relevant Wehl collections
Epacris impressa Labill. (Fig. 10)	(1) Marie Wehl: BJS, p. 2 (2) Henrietta Wehl: PCS, p. 26 (3) Henrietta Wehl: PCS, p. 33	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 9*: MEL2141924
Eremophila alternifolia R.Br.	Marie Wehl: BJS, p. 17	South Australia. Lake Bonney, [October] 1890, *E.Wehl s.n.*: MEL2262922
Eriochilus cucullatus (Labill.) Rchb.f. (Fig. 32)	Marie Wehl: LS, p. 8	No relevant Wehl collections
Erodium cicutarium (L.) L'Her. ex Aiton	Marie Wehl: BJS, p. 19	No relevant Wehl collections
Gastrodia procera G.W.Carr (Fig. 31)	Marie Wehl: LS, p. 6.	No relevant Wehl collections
Gastrodia sesamoides R.Br.	Henrietta Wehl: PCS, p. 37	No relevant Wehl collections
Geranium molle L.	Marie Wehl: BJS, p. 19	No relevant Wehl collections
Glossodia major R.Br. (Fig. 34)	(1) Marie Wehl: PCS, p. 51a (2) Marie Wehl: LS, p. 3	No relevant Wehl collections
Goodenia blackiana Carolin	Henrietta Wehl: PCS, p. 17	No relevant Wehl collections
Goodenia geniculata R.Br. (Figs 19, 20, 38)	(1) Marie Wehl: BJS, p. 7 (2) Marie Wehl: BJS, p. 31 (3) Marie Wehl: BJS, p. 32 (4) Henrietta Wehl: PCS, p. 2	No relevant Wehl collections
Goodenia sp.	Henrietta Wehl: PCS, p. 2	No relevant Wehl collections
Goodia medicaginea F.Muell.	Henrietta Wehl: PCS, p. 28	No relevant Wehl collections
Grevillea aquifolium Lindl.	(1) Marie Wehl: BJS, p. 23 (2) Henrietta Wehl: PCS, p. 4a	South Australia. Near Lake Bonney, New South Wales (in error), 1890, *E.Wehl 8*: MEL0098858
Grevillea sp.	Henrietta Wehl: PCS, p. 50	No relevant Wehl collections
Hakea rugosa R.Br. (Fig. 12)	(1) Marie Wehl: BJS, p. 16 (2) Henrietta Wehl: PCS, p. 21	South Australia. Lake Bonney, [August] 1887, *Mrs Dr Wehl s.n.*: MEL0675392
Helichrysum luteoalbum (L.) Rchb. (Fig. 8)	(1) Marie Wehl: BJS, p. 6 (2) Henrietta Wehl: PCS, p. 14	South Australia. Lake Bonney, 1887, *Miss Wehl 2*: MEL2166305
Hibbertia crinita Toelken	Marie Wehl: BJS, p. 30	No relevant Wehl collections
Hibbertia fasciculata R.Br. ex DC. (Fig. 12)	(1) Marie Wehl: BJS, p. 16 (2) Henrietta Wehl: PCS, p. 24	No relevant Wehl collections
Hibbertia sericea var. *densiflora* (Hook.) Benth.	Henrietta Wehl: PCS, p. 11	No relevant Wehl collections
Pterostylis cycnocephala Fitzg.	Marie Wehl: PCS, p. 49	No relevant Wehl collections
Hypochaeris radicata L.	Henrietta Wehl: PCS, p. 17	No relevant Wehl collections
Hypoxis glabella R.Br.	(1) Marie Wehl: BJS, p. 14 (2) Henrietta Wehl: PCS, p. 17	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 4*: MEL0107444
Kennedia prostrata R.Br. (Fig. 38)	Henrietta Wehl: PCS, p. 2	No relevant Wehl collections
Kunzea pomifera F.Muell. (Fig. 26)	(1) Marie Wehl: BJS, p. 10 (2) Marie Wehl: PCS, p. 61	No relevant Wehl collections
Lagenophora stipitata (Labill.) Druce (Fig. 36)	(1) Marie Wehl: BJS, p. 22 (2) Henrietta Wehl: PCS, p. 3	South Australia. Near Lake Bonney, 1887, *H.Wehl 10*: MEL2161639

Species (Current name)	Artist: location of work	Related herbarium specimens
Lasiopetalum schulzenii (F.Muell.) Benth.	(1) Marie Wehl: BJS, p. 23 (2) Henrietta Wehl: PCS, p. 38	No relevant Wehl collections
Leptinella reptans (Benth.) D.G.Lloyd & C.J.Webb (Figs 22, 37)	(1) Marie Wehl: BJS, p. 5 (2) Henrietta Wehl: PCS, p. 16	(1) South Australia. Lake Bonney, 1887, *Mrs Dr Wehl s.n.*: MEL2159639 (2) South Australia. Lake Bonney, 1887, *Mrs Dr Wehl s.n.*: MEL2161572
Leptoceras menziesii (R.Br.) Lindl. (Fig. 32)	(1) Marie Wehl: PCS, p. 48 (2) Marie Wehl: LS, p. 8	South Australia. Lake Bonney, 1882, *E.F.D (?) Wehl s.n.*: MEL2153299
Leptorhynchos elongatus DC.	Henrietta Wehl: PCS, p. 10	No relevant Wehl collections
Leptorhynchos squamatus (Labill.) Less.	(1) Marie Wehl: BJS, p. 20 (2) Henrietta Wehl: PCS, p. 10	South Australia. Near Lake Bonney, 1887, *H.Wehl 6*: MEL0248346
Leptospermum lanigerum (Sol. ex Aiton) Sm. (Fig. 26)	(1) Marie Wehl: BJS, p. 10 (2) Marie Wehl: LS, p. 11	South Australia. Lake Bonney, 1884, *M.Wehl 9*: MEL0615743
Leptospermum sp.	Henrietta Wehl: PCS, p. 45	No relevant Wehl collections
Leptospermum sp.	Henrietta Wehl: PCS, p. 46	No relevant Wehl collections
Leptospermum sp.	Henrietta Wehl: PCS, p. 50	No relevant Wehl collections
Leucopogon ericoides (Sm.) R.Br.	Henrietta Wehl: PCS, p. 25	No relevant Wehl collections
Leucopogon parviflorus (Andrews) Lindl.	(1) Henrietta Wehl: PCS, p. 31 (2) Marie Wehl: PCS, p. 60	South Australia. Lake Bonney, 1887, *C.C.M.Wehl 12*: MEL2120207
Leucopogon sp.	Henrietta Wehl: PCS, p. 50	No relevant Wehl collections
Leucopogon virgatus (Labill.) R.Br.	(1) Marie Wehl: BJS, p. 8 (2) Henrietta Wehl: PCS, p. 25	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 8*: MEL0089244
Liparophyllum exaltatum (Sol. ex Sims) Tippery & Les	Henrietta Wehl: PCS, p. 14a	No relevant Wehl collections
Lobelia anceps L.f.	Marie Wehl: BJS, p. 18	No relevant Wehl collections
Logania ovata R.Br.	Henrietta Wehl: PCS, p. 31	South Australia. Lake Bonney, 1890, *E.Wehl 14*: MEL0627667
Lotus australis Andrews	(1) Marie Wehl: BJS, p. 20 (2) Henrietta Wehl: PCS, p. 10	South Australia. Near Lake Bonney, 1887, *H.Wehl 4*,: MEL2090779
Lysimachia arvensis (L.) Manns & Anderb. (Fig. 36)	(1) Marie Wehl: BJS, p. 13 (2) Henrietta Wehl: PCS, p. 3	(1) South Australia. Lake Bonney, 1887, *Miss Wehl 14*: MEL2234917 (2) South Australia. Near Lake Bonney (N.S.W. in error), 1890, *E.Wehl 15*: MEL2234913
Mazus pumilio R.Br.	(1) Marie Wehl: BJS, p. 22 (2) Marie Wehl: PCS, p. 52	No relevant Wehl collections
Melaleuca decussata R.Br. (Fig. 35)	Marie Wehl: LS, p. 9.	No relevant Wehl collections
Melaleuca squarrosa Don ex Sm. (Fig. 35)	Marie Wehl: LS, p. 9	No relevant Wehl collections
Mentha satureioides R.Br. (Fig. 22)	(1) Marie Wehl: BJS, p. 5 (2) Henrietta Wehl: PCS, p. 13	South Australia. Lake Bonney, 1887, *Miss Wehl 1*: MEL2240280
Microtis arenaria Lindl.	Marie Wehl: LS, p. 17	South Australia. Lake Bonney, 1882, *E.Wehl s.n.*: MEL0099242
Millotia myosotidifolia (Benth.) Steetz	Henrietta Wehl: PCS, p. 7	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 7*: MEL0712145
Montia australasica (Hook.f.) Pax & K.Hoffm.	Henrietta Wehl: PCS, p. 22	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 5*: MEL2219081
Myoporum insulare R.Br.	Henrietta Wehl: PCS, p. 4a	No relevant Wehl collections
Olearia ramulosa (Labill.) Benth.	Marie Wehl: BJS, p. 30	No relevant Wehl collections
Olearia rudis (Benth.) F.Muell. ex Benth.	(1) Henrietta Wehl: PCS, p. 4 (2) Marie Wehl: LS, p. 12	No relevant Wehl specimens

Species (Current name)	Artist: location of work	Related herbarium specimens
Ornduffia umbricola (Aston) Tippery & Les	(1) Marie Wehl: BJS, p. 28 (2) Henrietta Wehl: PCS, p. 14a	South Australia. Lake Bonney, 1887, *Miss Wehl 4*: MEL0016406
Oxalis corniculata L.	(1) Marie Wehl: BJS, p. 27 (2) Henrietta Wehl: PCS, p. 17	No relevant Wehl collections
Oxalis pupurea L.	Marie Wehl: LS, p. 17	No relevant Wehl collections
Persicaria decipiens (R.Br.) K.L.Wilson	(1) Marie Wehl: BJS, p. 6 (2) Henrietta Wehl: PCS, p. 13	No relevant Wehl collections
Pheladenia deformis (R.Br.) D.L.Jones & M.A.Clem. (Fig. 34)	(1) Marie Wehl: PCS, p. 51 (2) Marie Wehl: LS, p. 3	No relevant Wehl collections
Pimelea phylicoides Meisn.	(1) Marie Wehl: BJS, p. 11 (2) Henrietta Wehl: PCS, p. 18	No relevant Wehl collections
Potentilla anserina L. (Fig. 37)	(1) Marie Wehl: BJS, p. 21 (2) Henrietta Wehl: PCS, p. 16	South Australia. Lake Bonney, 1887, *Miss Wehl 8*: MEL2226428
Prasophyllum sp. (Fig. 41)	Marie Wehl: PCS, p. 49	No relevant Wehl collections
Pterostylis concinna R.Br. (Fig. 41)	Marie Wehl: PCS, p. 49	No relevant Wehl collections
Pterostylis cucullata R.Br.	Marie Wehl: BJS, p. 21	No relevant Wehl collections
Pterostylis cycnocephala Fitzg. (Fig. 41)	Marie Wehl: PCS, p. 49	No relevant Wehl collections
Pterostylis striata Fitzg. (Figs 32, 41)	(1) Marie Wehl: PCS, p. 49 (2) Marie Wehl: LS, p. 8	No relevant Wehl collections
Pultenaea acerosa R.Br. ex Benth.	Henrietta Wehl: PCS, p. 35	No relevant Wehl collections
Pultenaea sp. (Figs 30, 35)	Marie Wehl: LS, p. 7	No relevant Wehl collections
Pultenaea tenuifolia R.Br. & Sims (Figs 30, 33)	(1) Henrietta Wehl: PCS, p. 28 (2) Henrietta Wehl: PCS, p. 35 (3) Marie Wehl: LS, p. 2 & 7	South Australia. Near Lake Bonney, New South Wales (in error), 1890, *E.Wehl 2*: MEL526316
Pyrorchis nigricans (R.Br.) D.L.Jones & M.A.Clem. (Fig. 29)	(1) Henrietta Wehl: PCS, p. 34 (2) Marie Wehl: LS, p. 4	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 1*: MEL2153225 South Australia. From the heath 20 miles west of Penola, 1890, *Mrs Dr Wehl s.n.*: MEL2153224 [as *Lyperanthus nigricans*]
Ranunculus lappaceus Sm.	Henrietta Wehl: PCS, p. 6	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl 16*: MEL2210018
Samolus repens (J.R.Forst. & G.Forst.) Pers. (Figs 7, 8)	(1) Marie Wehl: BJS, p. 34 (2) Henrietta Wehl: PCS, p. 14	South Australia. Lake Bonney, 1887, *Miss Wehl 3*: MEL2234389
Scaevola aemula R.Br.	Marie Wehl: BJS, p. 1	South Australia. Near Lake Bonney, 1887, *H.Wehl 2*: MEL1521958
Scaevola albida (Sm.) Druce	Marie Wehl: BJS, p. 1	South Australia. Near Lake Bonney, 1887, *H.Wehl 3*: MEL1522187
Schenkia australis (R.Br.) G.Mans. (Fig. 22)	(1) Marie Wehl: BJS, p. 5 (2) Henrietta Wehl: PCS, p. 15	No relevant Wehl collections
Sebaea albidiflora F.Muell. (Fig. 25)	(1) Marie Wehl: BJS, p. 4 (2) Henrietta Wehl: PCS, p. 7	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 8*: MEL0709628
Selliera radicans Cav.	Marie Wehl: BJS, p. 18	South Australia. Near Lake Bonney, 1887, *H.Wehl 24*: MEL2193908
Senecio pinnatifolius A.Rich.	Henrietta Wehl: PCS, p. 4	South Australia. Lake Bonney, 1887, *Mrs Dr Wehl s.n.*: MEL2168632
Sherardia arvensis L. (Fig. 23)	(1) Marie Wehl: BJS, p. 3 (2) Henrietta Wehl: PCS, p. 31 (3) Henrietta Wehl: PCS, p. 50	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 3*: MEL2268416
Silene gallica L. (Fig. 28)	(1) Marie Wehl: BJS, p. 24 (2) Henrietta Wehl: PCS, p. 12	No relevant Wehl collections

Species (Current name)	Artist: location of work	Related herbarium specimens
Solanum nigrum L.	(1) Marie Wehl: BJS, p. 14 (2) Henrietta Wehl: PCS, p. 20	No relevant Wehl collections
Stellaria pungens Brongn. (Fig. 24)	Marie Wehl: BJS, p. 9	South Australia.Near Lake Bonney, 1890, *E.Wehl 13*: MEL1596248
Stylidium despectum R.Br. (Fig. 25)	Marie Wehl: BJS, p. 4	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 16*: MEL2259156
Swainsona lessertiifolia DC.	(1) Marie Wehl: BJS, p. 17 (2) Henrietta Wehl: PCS, p. 24 (3) Henrietta Wehl: PCS, p. 33 (4) Marie Wehl: LS, p. 10	South Australia. Near Lake Bonney (N.S.W. in error), 1890, *E.Wehl 10*: MEL1544173
Pterostylis concinna R.Br.	Marie Wehl: PCS, p. 49	No relevant Wehl collections
Tetragona implexicoma (Miq.) Hook.f.	(1) Marie Wehl: BJS, p. 26 (2) Henrietta Wehl: PCS, p. 21	South Australia. Lake Bonney, 1887, *Miss Wehl 13*: MEL0099902
Tetratheca ciliata Lindl.	Henrietta Wehl: PCS, p. 29	(1) South Australia. Lake Bonney, 1887, found in heath, *Mrs Dr Wehl 10*: MEL1008187 (2) South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 10*: MEL1008244
Tetratheca pilosa Labill.	Marie Wehl: LS, p. 1	No relevant Wehl collections
Thelymitra alcockiae D.L. Jones ex Jeanes	(1) Henrietta Wehl: PCS, p. 36 (2) Marie Wehl: LS, p. 5	South Australia. Near Lake Bonney, undated, *E.Wehl 3*: MEL0114409
Thelymitra antennifera (Lindl.) Hook.f.	(1) Henrietta Wehl: PCS, p. 36 (2) Marie Wehl: LS, p. 5	South Australia. Near Lake Bonney, 1890, *E.Wehl 4*: MEL1549759
Thelymitra epipactoides F.Muell.	Marie Wehl: PCS, p. 53	No relevant Wehl collections
Thelymitra ixioides Sw.	Marie Wehl: LS, p. 5	No relevant Wehl collections
Tricoryne elatior R.Br.	(1) Marie Wehl: BJS, p. 27 (2) Henrietta Wehl: PCS, p. 15	No relevant Wehl collections
Utricularia dichotoma Labill.	Marie Wehl: PCS, p. 52	South Australia. Lake Bonney, 1882, *E.Wehl, s.n.*: MEL0090021
Veronica calycina R.Br. (Fig. 25)	(1) Marie Wehl: BJS, p. 4 (2) Henrietta Wehl: PCS, p. 27	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 5*: MEL17963
Veronica gracilis R.Br.	Marie Wehl: BJS, p. 29	No relevant Wehl collections
Veronica peregrina L. (Fig. 21)	(1) Marie Wehl: BJS, p. 15 (2) Henrietta Wehl: PCS, p. 27	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 4*: MEL2257104
Viola hederacea Labill. var. *hederacea*	(1) Henrietta Wehl: PCS, p. 27 (2) Henrietta Wehl: PCS, p. 33	South Australia. Lake Bonney, 1888, *Mrs Dr Wehl 6*: MEL100359
Wahlenbergia gracilenta Lothian	(1) Marie Wehl: BJS, p.25 (2) Henrietta Wehl: PCS, p. 11	South Australia. Near Lake Bonney, 1887, *H.Wehl 7*: MEL0057569
Wahlenbergia stricta (R.Br.) Sweet var. *stricta*	Henrietta Wehl: PCS, p. 11	No relevant Wehl collections
Wurmbea dioica (R.Br.) F.Muell.	(1) Marie Wehl: BJS, p. 14 (2) Henrietta Wehl: PCS, p. 17 (3) Henrietta Wehl: PCS, p. 22 [two images]	South Australia. Lake Bonney, undated, *Mrs Dr Wehl 6*: MEL0583425

Appendix 2. Fungi collected by Marie Wehl mentioned in lists and descriptions of novel taxa and represented by extant herbarium specimens and illustrations in various institutions.

Taxa based on Wehl type material are in bold (and listed first). For the novel taxa, details of names and type citations in protologues are provided in Table 2 of the main text in the accompanying article. Current name in square brackets if different from original name. The unpublished lists in MEL are two sheets of determinations by Cooke, held in the MEL archives (RB MSS M86B, M.C. Cooke's determinations of Australian fungi for F. v. Mueller, Dec. 1881 to Aug. 1891). The list with 28 entries is denoted A and the other list B. For lists, incorrect attribution to "Fr." as the author of a taxon name is not indicated, unless related to species described from Australia. Information on herbarium specimens in K and MEL was taken directly from specimens, or otherwise the source of the information is provided. For illustrations, quoted information is as written on the illustrations. Illustrations in K(M) are all marked "Drawings from the collection of Dr M. C. Cooke. Presented by The Bentham Trustees, June, 1911". Illustrations in the album *Colored drawings of Australian fungs* held at the NHM (Natural History Museum, London) are all labelled "Drawn by Miss Wehl" and are un-numbered but referred to below by sheet numbers, starting at 1 for the first sheet of Wehl illustrations. KRC Werribee is Victorian Government Library Service, Knowledge Resource Centre, Werribee. Figures in the series 42–60 cited at the end of column entries refer to figures in the main text of the accompanying article.

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus australis Cooke & Massee [*Pleurotus australis* Sacc.]	A-14	Mueller (1888), as "*A. leptospermi* F. v. Mueller"	Cooke (1887a)	–	"on roots of *Leptospermum* sp., Lake Bonney, S.A., M. Wehl No. 14 [according to Pegler (1965)] [K(M) 59506, TYPE]	(1) "14, Ag (Pleurotus) australis Cke & Mass" [MEL Library, A228990, RB MSS A54] (2) "Ag (Pleurotus) australis Cke & Mass". Artist not known, copy of painting (1) [MEL Library, A228990, RB MSS A54]	"88*, Australia, on wood, Wehl No. 14, *AGARICUS (PLEUROTUS) AUSTRALIS*, C & M, on wood, Lake Bonney N E of S Australia, Sacc Supp187" [K(M), in *Pleurotus* box, 2.1.4.1.2]	–	–	Fig. 10. *Agaricus australis*. Fig. 56.
Agaricus columbicolor Cooke & Massee [*Lepiota lavendulae* (Cooke & Massee) Sacc.]	B-26	Mueller (1889b)	Cooke (1887b)	–	"*Ag (Lepiota) columbicolor* C & M, not B & Br, Melbourne", "26, In ferny gully, *Ag (Lepiota) columbicolor* C & M" [K(M) 192530, TYPE]	–	–	Sheet 7. "*Agaricus lavendulae*, Cooke & Massee". Fig. 47.	–	Fig. 3. *Agaricus lavendulae*.
Agaricus laeticolor Cooke & Massee [*Entoloma laeticolor* Sacc.]	B-11	Mueller (1889b)	Cooke (1887b)	–	"on sandy soil, near Melbourne, M. Wehl No. 11" [according to Pegler (1965)] [K(M), TYPE]	–	"6, Australia, on sandy soil, Wehl No.11, *AGARICUS (ENTOLOMA) LAETICOLOR* Cke & Mass, near Melbourne 1887, Sacc Supp 359." [K(M), in *Entoloma* box, 2.1.13.7.8]	Sheet 6. "*Agaricus laeticolor*, Cooke & Massee". Fig. 46.	"Handbook 201 / Rhodosporae / Wehl No 11 / fig 201 / 12-14 µ / *ENTOLOMA LAETICOLOR* Cke & Mass / on sandy soil / near Melbourne / Sacc Supp 359"	–
Agaricus limonius Cooke & Massee [*Agrocybe limonia* Pegler]	A-19	Mueller (1888), as "*A. limoneus*"	Cooke (1887a)	–	"on damp ground, Lake Bonney, S.A., M. Wehl No. 19" [according to Pegler (1965)] [K(M), TYPE]	–	–	–	"Handbook 259 / Ochrosporae / Fig. 259 / Wehl 19 / 15-16 x 8-9 µ / *FLAMMULA LIMONIA* Cke & Mass / on damp ground / Lake Bonney / NE of S. Australia / Sacc 3379". Fig. 60.	p. 51. "On rich soil, …. Lake Bonney"
Agaricus melaniceps Cooke & Massee [*Melanoleuca melaniceps* (Cooke & Massee) Pegler]	B-41	Mueller (1889b)	Cooke (1887b)	–	"on the ground, near Melbourne, M. Wehl No. 41" [according to Pegler (1965)] [K(M) 160368, TYPE]	–	"710*, Australia, on the ground, Wehl No. 41, *AGARICUS (ENTOLOMA) MELANICEPS* Cke & Mass, near Melbourne 1887, Sacc Supp 360." [K(M), in *Agaricus* box, 2.1.13.9.11]	Sheet 8. "*Agaricus melanoceps* [sic]. Cooke & Massee"	"Handbook 199 / Rhodosporae / 10-12 µ / Wehl 41 / fig 199 / *ENTOLOMA MELANICEPS* Cke & Mass / on the ground / near Melbourne / Sacc Supp 360"	–

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus obclavatus [*Lepiota obclavata* (Cooke & Massee) Sacc.]	B-14	Mueller (1889b)	Cooke (1887b)	–	"14, In charcoal under a gum tree, *Ag (Lepiota) obclavatus* C & M" [K(M), TYPE]	–	–	Sheet 10. "*Agaricus obclavatus*, Cooke & Massee"	–	–
Agaricus olidus Cooke & Massee [*Agrocybe olida* (Cooke & Massee) Pegler]	A-7	Mueller (1888)	Cooke (1887a)	–	"on stony ground, Lake Bonney, S.A., 1886, M. Wehl No. 7" [according to Pegler (1965)] [K(M), TYPE]	"viscid odour strong, [drawing of spores] 10 x 6, 7, *Ag. (Hebeloma) olidus* C & M" [MEL Library, A228990, RB MSS A54]	"19, Australia, Viscid odour strong, Wehl No. 7, on the ground, *AGARICUS (HEBELOMA) OLIDUS* C & M, Lake Bonney NE of S Australia, Sacc 3275." [K(M), in *Hebeloma* box, 2.1.14.3.3]	–	"Handbook 243 / Ochrosporae / Pileus viscid. Odour strong / 10 x 6 µ / Fig 243 / Wehl 7 / *HEBELOMA OLIDA* Cke & Mass / on the ground / Lake Bonney, S.A / Sacc 3275"	p. 48. "On stony ground. Lake Bonney"
Agaricus olivaceoalbus Cooke & Massee [*Oudemansiella eradicata* (Kalchbr.) Zhu L. Yang, G.M. Muell., G. Kost & Rexer]	A-3	Mueller (1888), as "Fries" [but published as new by Cooke & Massee, non Fr.]	Cooke (1887a)	–	"on the ground under she-oaks (*Casuarina quadrivalvis*), Lake Bonney, S.A., 1886, M. Wehl No. 3" [according to Pegler (1965)] [K(M) 129475, TYPE]	"3, *Ag (Collybia) olivaceo-albus* C & M" [MEL Library, A228990, RB MSS A54]. Fig. 49.	"8bis, Australia, Wehl No. 3, *AGARICUS (COLLYBIA) OLIVACEO-ALBUS* C & M, on the ground, Australia" [Reproduced by Petersen (2008)]	–	–	Fig. 7. *Agaricus olivaceo-albus*. Fig. 56.
Agaricus ozes* var. *crassipes Cooke & Massee [*Inocybe crassipes* (Cooke & Massee) Pegler]	A-22	Mueller (1888)	Cooke (1887a)	–	"Lake Bonney, S.A., M. Wehl 22" [according to Pegler (1965)] [K(M), TYPE]	(1) "stem & pileus striate, 22, *Ag (Collybia) ozes* var *crassipes*" [MEL Library, A228990, RB MSS A54]. Fig. 54. (2) "*Ag (Collybia) ozes* var *crassipes*, stem & pileus striate". Artist not known, copy of painting (1) [MEL Library, A228990, RB MSS A54]. Fig. 55.	–	–	"Handbook 97 / Leucospori/ Fig 97 / Wehl 22 / *COLLYBIA OZES* Fries var. *CRASSIPEDA* C & M / on ground / Lake Bonney, NE of South Australia". Fig. 59.	–
Agaricus polychromus Cooke & Massee [*Pleurotus polyphemus* (Cooke & Massee) Sacc.]	B-1	Mueller (1889b)	Cooke (1887b)	–	"Wehl No. 1" [pers comm. Begoña Aguirre-Hudson, K] [K(M), TYPE]	–	"35*, Australia, on logs, Wehl No. 1, =*polyphemus*, *AGARICUS (PLEUROTUS) POLYCHROMUS* Cke & Mass not Berk, on logs, near Melbourne, Sacc Supp 196." [K(M), in *Pleurotus* box, 2.1.4.1.2]	Sheet 11. "*Agaricus polyphemus*, Cooke & Massee"	–	–
Agaricus subcorticalis Cooke & Massee [*Mycena subcorticalis* (Cooke & Massee) Sacc.]	A-16	Mueller (1888)	Cooke (1887a)	–	"on *Banksia* sp., Wehl 16" [according to K specimen database] [K(M) 37438, TYPE]	"16, *Ag (Mycena) subcorticalis* C & M, on wood" [MEL Library, A228990, RB MSS A54]	"219 X, Australia, on branches of *Banksia*, Wehl No 16, *AGARICUS (MYCENA) SUBCORTICALIS* C & M, on wood, Lake Bonney N E of S Australia, Sacc Supp 143" [K(M), in *Mycena* box, 2.1.13.2.114]	–	–	Fig. 8. *Agaricus subcorticalis*.

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus veluticeps Cooke & Massee [*Collybia veluticeps* (Cooke & Massee) Sacc.]	B-3	Mueller (1889b)	Cooke (1887b)	–	"3. Ferny gully, *Ag. (Coll.) veluticeps* C & M", "*Ag. (Collybia) veluticeps* C & M, Lake Bonney, Australia" [K(M), TYPE]	–	–	Sheet 15. "*Agaricus veluticeps*, Cooke & Massee"	"Handbook 94 / Leucospori / pileus velvety / Wehl 3 / fig. 94 / *COLLYBIA VELUTICEPS* Cke & Mass / on the ground / near Melbourne"	–
Agaricus wehlianus F.Muell. ex Cooke [*Pluteus wehlianus* (F.Muell. ex Cooke) Sacc.]	A-11	Mueller (1888)	Cooke (1887a)	–	"on low damp ground, Lake Bonney, S.A., M. Wehl No. 11" [according to Pegler (1965)] [K(M), TYPE]	"14-16 µ, pale ochre, 11, *Agaricus (Pluteus) wehlianus* Müll" [MEL Library, A228990, RB MSS A54]. Fig. 50.	–	–	–	Fig. 13. *Agaricus wehlianus*. Fig. 58.
Boletus australis Cooke & Massee	B-4	Mueller (1889b)	Cooke (1887b)	–	"1887, Wehl 4" [according to K specimen database] [K(M) 177960, TYPE]	–	"35, *Viscipelles*, Australia, pileus viscid, Wehl No. 4, *BOLETUS AUSTRALIS* Cke & Mass On the ground near Melbourne, 1887, Sacc 4674." [K(M), in *Boletus* L-Z box, 2.1.15.8.2]	Sheet 15. "*Boletus australis*, Cooke & Massee"	"Handbook 552 / Viscipelles / pileus viscid / Wehl 4 / fig. 552 / 20 x 5-6 u / *BOLETUS AUSTRALIS* Cke & Mass / on the ground / nr Melbourne / Sacc 4674"	–
Cantharellus politus Cooke & Massee	B-27	Mueller (1889b)	Cooke (1887b)	–	"on ground, Melbourne, M. Wehl No. 27" [according to Pegler (1965)] [K(M) 59488, TYPE]	–	"4, 21*, Australia, viscid shining, Wehl No. 27, on the ground, *CANTHARELLUS POLITUS* Cke & Mass, on the ground nr Melbourne 1887, Sacc Supp 267." [K(M) in *Cantharellus* box, 2.1.1.1]. Fig. 53.	Sheet 16. "*Cantharellus politus*, Cooke & Massee"	–	Fig. 32. *Cantharellus politus*.
Ombrophila radicata W. Phillips ex Cooke	–	–	Cooke (1887b)	–	"Disc liver coloured externally flesh colour, 2, Found on stoney range, Melbourne, Miss Wehl", "*Ombrophila radicata* Phil. n. s., near Melbourne, Miss Wehl" [K(M) 192505, TYPE]	–	(1) "Wm. Phillips. Reed. 1906. [printed label] *Ombrophila radicata* Phil, Australia, Icon. Wehl.", "This drawing reached me after I had determined the dried specimen and completed my own drawing hence the disagreement between them in colour." [K(M) 192505] (2) "Drawings by Wm. Phillips. Reed. 1906 [printed label]" [interpretative copy of (1) also with microscopic features and various text] [K(M) 192505]	Sheet 18. "*Ombrophila radicata*, Philips"	–	Fig. 166. *Ombrophila radicata*.

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Panus carbonarius Cooke & Massee [*Hohenbuehelia carbonaria* (Cooke & Massee) Pegler]	A-6	Mueller (1888)	Cooke (1887a)	–	"Lake Bonney, S.A., M. Wehl No. 6" [according to Pegler (1965)] [K(M), TYPE]	"6, 12 x 5, *Panus carbonarius* Cke & Mass" [MEL Library, A228990, RB MSS A54]. Fig. 51.	"3, Australia, on places where ferns were burnt, Wehl No. 6, *PANUS CARBONARIUS* C & M, Sacc Supp 326, Lake Bonney N E of S Australia." [K(M), in *Panus* box, 2.1.4.1.10]. Fig. 52.	–	–	p. 97. "Amongst ferns. Lake Bonney". Fig. 46. *Panus carbonarius*. Fig. 57.
Agaricus aetities Fr. [*Mycena aetites* (Fr.) Quél.]	B-16	Mueller (1889b), as "*A. aetitius*"	–	"16, In a ferny gully, *Ag (mycena) aetities* Fr" [MEL0227895]	–	–	–	Sheet 10. "*Agaricus aetilis* [sic] Fries"	–	–
Agaricus aquilus Fr. [*Leptonia aquila* (Fr.) Gillet]	A-18	–	–	"18, On stony ground, *aquilus* Fr., pink [drawing of spores]", "no. 18, *Agaricus (Leptonia) aquilus* Fr, Lake Bonney, S Australia, Jan 1887" [MEL2367932]	–	"18, *Ag (Leptonia) aquilus* Fr [drawing of spores]" [stored with specimen, MEL2367932]	–	–	–	p. 41. "On the ground. Lake Bonney"
Agaricus bloxamii Berk. & Broome [*Entoloma bloxamii* (Berk. & Broome) Sacc.]	B-20	Mueller (1889b), as "*A. Bloxanii*"	–	"20, In sand under ferns, *Ag. Bloxami*" [MEL0228017]	–	–	–	Sheet 1. "*Agaricus bloxami*, Berkeley". Fig. 45.	–	–
Agaricus cancrinus Fr. [*Entoloma neglectum* (Lasch) Arnolds]	A-12, as "var."	–	–	"12. On stony ground, pink, *Claudopus*, 12-6 [drawing of spores]", "*Ag. (Clitopilus) cancrinus* Fr. Variety, No. 12, lake Bonney, S. Australia, Miss Wehl" [MEL2367935]	–	"12, *Ag (Clitopilus) cancrinus* Fr. small variety". [stored with specimen, MEL2367935]	–	–	–	–
Agaricus cancrinus Fr. [*Entoloma neglectum* (Lasch) Arnolds]	B-25	Mueller (1889b)	–	"25, In ferny gully, *Ag (Clitopilus) cancrinus* Fr" [MEL0228018]	–	–	–	Sheet 1. "*Agaricus cancrinus*, Fries". Fig. 45.	–	–
Agaricus clypeolarius Bull. [*Lepiota clypeolaria* (Bull.) P.Kumm.]	A-21	–	–	"21, In long grass on damp ground, *clypeolarius*", "*Ag (Leptonia) clypeolarius* Fr, Lake Bonney, S Australia, Miss Wehl" [MEL367929]. Fig. 43.	–	"21, *Agaricus (Lepiota) clypeolarius* Fr" [stored with specimen, MEL2367929]. Fig. 43.	–	–	–	–
Agaricus conocephalus Bull. [*Galerella conocephala* (Bull.) Bon]	B-33	Mueller (1889b)	–	"*Bolbitius (Ag (Galera) conocephalus* prox, 33, In soft sil on the range" [MEL0228179]	–	–	–	Sheet 2. "*Agaricus conocephallus*, Bulliard"	–	–
Agaricus coronillus Bull. [*Stropharia coronilla* (Bull.) Quél.]	B-9	Mueller (1889b)	–	"*Agaricus coronillus*, 9, On the range" [MEL0228020]	–	–	–	Sheet 2. "*Agaricus coronillus*, Bulliard"	–	–

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus crenatus Lasch [*Psathyrella crenata* (Lasch) Gillet]	A-23	–	–	"23, *Agaricus (Psathyrella) crenatus*, [drawing of spores], 10 x 5, brownish black, On rich ground, Lake Bonney, Miss Wehl" [MEL2367930]	–	"23, *Ag (Psathyrella) crenatus* Fr" [stored with specimen, MEL2367930]	–	–	–	p. 68. "On grassy ground. Lake Bonney"
Agaricus crociphyllus Cooke & Massee [*Gymnopilus crociphyllus* (Sacc.) Pegler]	B-23	Mueller (1889b)	–	"23, found on an old rail in fence, *A. pardalius*, F. v. M", "*Ag. (Flammula) crociphyllus* C & M", "21" [MEL0227889]	–	–	–	Sheet 12, "*Agaricus pardalius*, F. v. Mueller"	–	–
Agaricus debilis Fr. [*Mycena debilis* (Fr.) Quél.]	A-15	–	–	"Lake Bonney, Miss Wehl, 15, In a ferny gully, *Ag. (Mycena) debilis* Fr" [MEL2367933]		"margin striate, 15, *Ag (Mycena) debilis* Fr" [stored with specimen, MEL2367933]	–	–	–	–
Agaricus epigaeus Pers. [*Crepidotus epigaeus* (Pers.) Sacc.]	B-7	Mueller (1889b), as "Batsch"	–	"7, On damp ground, *Ag (Crepidotus) epigaeus* Batsch" [MEL0228019]	–	–	–	Sheet 3. "*Agaricus epigoeus*, Persoon"	–	–
Agaricus flaccidus Sowerby [*Clitocybe flaccida* (Sowerby) P.Kumm.]	A-20, "var."	–	–	"20, On stony ground, *flaccidus*", "1886, *Ag. (Clitocybe) flaccidus* Fr variety, Lake Bonney, S. Australia, Miss Wehl" [MEL23677931]	–	"20, *Ag (Clitocybe) flaccidus* Fr., variety" [stored with specimen, MEL23677931]	–	–	–	–
Agaricus foenisecii Pers. [*Panaeolina foenisecii* (Pers.) Maire]	A-8	–	–	–	–	"8, *Ag (Psathyra) foenisecii* Fr" [MEL Library, A228990, RB MSS A54]. Fig. 51.	–	–	–	p. 64. "Amongst grass. Lake Bonney"
Agaricus furfuraceus Pers. [*Tubaria furfuracea* (Pers.) Gillet]	–	–	–	–	–	–	–	Sheet 5. "*Agaricus furfuraceus*, Persoon"	–	p. 57. "On chips etc. … Lake Bonney"
Agaricus fusus Batsch [*Pholiota fusa* (Batsch) Singer]	B-28	Mueller (1889b)	–	"28, On low damp ground, *Ag (Flammula) fusus* Fr, [MEL0227888]	–	–	–	Sheet 4. "*Agaricus fusus*, Batsch"	–	–
Agaricus hiemalis Osbeck [*Mycena hiemalis* (Osbeck) Quél.]	B-37	Mueller (1889b)	–	"37, *Ag. hiemalis*, Growing on a fern stem" [MEL0227887]	–	–	–	Sheet 5. "*Agaricus hiemalis*, Retzius"	–	–
Agaricus infundibuliformis [*Clitocybe gibba* (Pers.) P.Kumm.]	B-24	Mueller (1889b)	–	"*Ag. infundibuliformis*, 24, In ferny gully" [MEL0227883]	–	–	–	Sheet 6. "*Agaricus infundibuliformis*, Schaeffer". Fig. 46.	–	–
Agaricus melaleucus Pers. [*Melanoleuca melaleuca* (Pers.) Murrill]	B-35	Mueller (1889b)	–	"35, On the range, *Ag (Tricholoma) melaleucus* Fr" [MEL0227893]	–	–	–	Sheet 7. "*Agaricus melaleucus*, Persoon". Fig. 47.	–	–

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus melleus Vahl [*Armillaria mellea* (Vahl) P.Kumm.]	B-40 [and "B-39 "no specimen – probably – 40"]	Mueller (1889b)	–	–	–	–	–	Sheet 8. "*Agaricus melleus*, Vahl"	–	–
Agaricus mollis Schaeff. [*Crepidotus mollis* (Schaeff.) Staude]	B-6	Mueller (1889b)	–	"*Agaricus mollis*, 6, Found on a decayed honeysuckle log" [MEL0227885]	–	–	–	–	–	–
Agaricus muralis Sowerby [*Omphalina muralis* (Sowerby) Quél.]	B-22	Mueller (1889b)	–	"22, Found on the range, *Ag (Omph) muralis*" [MEL0228016]	–	–	–	Sheet 9. "*Agaricus muralis*, Sowerby"	–	–
Agaricus muscarius L. [*Amanita muscaria* (L.) Lam.]	B-10, "*Agaricus muscarius* v. *puellaris* Fr"	Mueller (1889b)	–	"*Ag muscarius* var. *puellaris*, 10, Sandy ferny ground" [MEL0227891]	–	–	–	Sheet 9. "*Agaricus muscarius* Linne"	–	–
Agaricus nummularius Lam. [*Collybia nummularia* (Lam.) Gillet]	A-4	–	–	"On sandy ground amongst ferns, *Ag. (Coll) nummularius*" [MEL2367926]	–	"4, *Ag (Collybia) nummularius* Fr" [stored with specimen, MEL2367926]	–	–	–	–
Agaricus papilionaceus Pers. [*Panaeolus papilionaceus* (Bull.) Quél.]	A-13	–	–	"*Ag (Panaeolus) papilionaceus* Fr, 13, In long grass, Lake Bonney, Miss Wehl, 14-6 [drawing of spores], *Panaeolus*, dark brown" [MEL2367934]. Fig. 42.	–	"13, *Ag (Panaeolus) papilionaceus* Fr" [stored with specimen, MEL2367934]. Fig. 42.	–	–	–	–
Agaricus pyxidatus Bull. [*Omphalina pyxidata* (Bull.) Quél.]	A-17	–	–	"17, Stony ground, *Omphalia, pyxidatus*, 8 x 6 [drawing of spores]" [MEL2367928]	–	(1) "17, *Ag. (Omphalia) pyxidatus*" [stored with specimen, MEL2367928] (2) "*Ag. (Omphalia) pyxidatus* Fr.". Artist not known, copy of painting (1) [MEL Library, A228990, RB MSS A54]	–	–	–	–
Agaricus rutilans Schaeff. [*Tricholomopsis rutilans* (Schaeff.) Singer]	B-15	Mueller (1889b)	–	"15, At the root of a honeysuckle, *Agaricus rutilans*" [MEL0228023]	–	–	–	–	–	–
Agaricus sanguinolentus Alb. & Schwein. [*Mycena sanguinolenta* (Alb. & Schwein.) P.Kumm.]	B-12	Mueller (1889b)	–	"*Agaricus sanguinolentus* Fr, 12, Sandy ferny ground" [MEL0227786]	–	–	–	Sheet 12. "*Agaricus sanguinolentus*, Schweinitz". Fig. 48.	–	–
Agaricus sapineus Fr. [*Gymnopilus sapineus* (Fr.) Murrill]	A-24	–	–	"[drawing of spores], 24, *Agaricus (Flammula) sapineus* Fr, on high dry ground, Lake Bonney, Miss Wehl" [MEL2025969]	–	–	–	–	–	–

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus sapineus Fr. [*Gymnopilus sapineus* (Fr.) Murrill]	B-34	Mueller (1889b)	–	"*Ag (Flammula) sapineus* Fr, 34, On decayed wood" [MEL0227892]	–	–	–	Sheet 13. "*Agaricus sapineus*, Fries" [assume matches to 34, specimen and illustration are consistent]	–	–
Agaricus scolecinus Fr. [*Naucoria scolecina* (Fr.) Quél.]	A-2	–	–	"2, Sandy ground, *Ag (Nauc) scolecinus*" [MEL2367927]	–	"2, *Ag (Naucoria) scolecinus* Fr" [stored with specimen, MEL2367927]	–	–	–	p. 54. "On moist ground. Lake Bonney"
Agaricus speireus Fr. [*Mycena speirea* (Fr.) Gillet]	B-36	Mueller (1889b)	–	"*Ag (Mycena) speireus* Fr, 36, In ferny gully" [MEL0228022]	–	–	–	Sheet 13. "*Amanita spissus*, Fries" [presumed mislabelling for *A. speireus* based on appearance of sporophores]	–	–
Agaricus spissus Fr. [*Amanita excelsa* (Fr.) Bertill.]	A-28, "probably"	–	–	–	–	(1) "specimen lost, 28, *Agaricus (Amanita) spissus* Fr. probably" [MEL Library, A228990, RB MSS A54] (2) "*Agaricus (Amanita) spissus*". Artist not known, copy of painting (1) [MEL Library, A228990, RB MSS A54]	–	–	–	p. 3. "In woods. Lake Bonney"
Agaricus trepidus Fr. [*Psathyrella trepida* (Fr.) Gillet]	B-5	Mueller (1889b)	–	"5, On decayed wood, *Agaricus trepidus* Fr" [MEL0227886]	–	–	–	Sheet 14. "*Agaricus trepidus*, Fries"	–	–
Agaricus trichopus Scop. (Agaricaceae)	–	–	–	–	–	–	–	Sheet 14. "*Agaricus trichopus*, Scopoli'	–	–
Agaricus tylicolor Fr. [*Sagaranella tylicolor* (Fr.) V. Hofst., Clémençon, Moncalvo & Redhead] [According to Hofstetter *et al.* (2014)]	B-19	Mueller (1889b)	–	"19, On the range, *Ag (Colly) tylicolor*" [MEL0227894]	–	–	–	Sheet 3. "*Agaricus cylicolor* [sic.], Fries"	–	–
Agaricus umbratilis Fr. [*Arrhenia umbratilis* (Fr.) Redhead, Lutzoni, Moncalvo & Vilgalys] [According to Redhead *et al.* (2002)]	A-9	–	–	"9, *Ag (Ompha) umbratilis* Fr, On a stony hill, Lake Bonney, Miss Wehl" [MEL0227787]	–	"9, *Ag (Omphalea) umbratilis* Fr" [MEL Library, A228990, RB MSS A54]	–	–	–	–
Agaricus vinosus Bull. [*Flammula vinosa* (Bull.) Sacc.]	B-21	Mueller (1889b)	–	–	–	–	–	–	–	–

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Agaricus virgineus Wulfen [redetermined on the specimen as *Hygrocybe rodwayi* (Massee) A.M. Young by A.M. Young]	–	–	–	"*Hygrophorus virgineus* Fr junior, Lake Bonney, S Australia" [MEL1052611]	–	–	–	Sheet 18. "*Hygrophorus virgineus*, Fries"	–	p. 74, *Hygrophorus virgineus*, 'On downs and short pastures. Esculent. Lake Bonney"
Clavaria flava [*Ramaria flava* (Schaeff.) Quél.]	B-8	Mueller (1889b)	–	"*Clavaria flava*, 8, Found near a burnt log" [MEL2367936]	–	–	–	Sheet 17. *Clavaria flava*, Persoon	–	–
Coprinus macrorhizus (Pers.) Rea [*Coprinopsis cinerea* (Schaeff.) Redhead, Vilgalys & Moncalvo] [According to Redhead *et al.* (2001)]	A-1	–	–	"No. 1, Lake Bonney, Miss M.Wehl, 16 x 8 [drawing of spores], *Coprinus macrorhizus* P, Lake Bonney, South Australia" [MEL2367924]. Fig. 44.	–	"1, *Coprinus macrorhizus* P" [stored with specimen, MEL2367924]. Fig. 44.	–	–	–	p. 69. *Coprinus fimetarius* var. *macrorhizus*, 'Lake Bonney'
Coprinus micaceus (Bull.) Fr. [*Coprinellus micaceus* (Bull.) Vilgalys, Hopple & Jacq. Johnson] [According to Redhead *et al.* (2001)]	A-10	–	–	–	–	"pileus striate, dark brown, 8-12 µ, very variable, 10, *Coprinus micaceus* Fr" [MEL Library, A228990, RB MSS A54]	–	–	–	–
Coprinus plicatilis (Curtis) Fr. [*Parasola plicatilis* (Curtis) Redhead, Vilgalys & Hopple] [According to Redhead *et al.* (2001)]	B-38	Mueller (1889b)	–	"*Coprinus plicatilis*, 38 [28 crossed out], In ferny gully" [MEL0228021]	–	–	–	Sheet 16. "*Coprinus plicatilis*, Fries"	–	–
Cortinarius sp.	B-17 "*Cortinarius* (*Telamonia*) insufficient – without colour of gills in the young state"	–	–	–	–	–	–	–	–	–
Geastrum floriforme Vittad.	B-31	Mueller (1889b), as "Geaster floriformis"	–	"31, Found on the range, *Geaster floriformis*" [MEL0227884]	–	–	–	Sheet 18. "*Geaster planiformis*, Vittadini"	–	–
Hygrophorus miniatus [*Hygrocybe miniata* (Fr.) P. Kumm.]	A-25	–	–	"25, In a gully under ferns, Lake Bonney, Miss Wehl" [MEL2367925]	–	"25, *Hygrophorus miniatus* Fr" [stored with specimen, MEL2367925]	–	–	–	–
Immature [Unnamed species]	A-5, "immature"	–	–	–	–	"8 x 5, 5, immature" [MEL Library, A228990, RB MSS A54]. Fig. 51.	–	–	–	–
Immature [Unnamed species]	B-13 "immature"	–	–	–	–	–	–	–	–	–

Taxon	Lists and descriptions of novel taxa			Herbarium specimens		Illustrations				
	Unpublished lists (MEL)	Published lists (Mueller)	Published descriptions (Cooke)	MEL	K(M)	MEL	K(M)	*Colored drawings of Australian fungs* NHM (London)	Cooke (1892) *Handbook* interleaved copy at KRC Werribee	Cooke (1892) *Handbook*
Lycoperdon sp.	B-30 "no specimen"	–	–	–	–	–	–	–	–	–
Morchella conica Pers.	A-26	–	–	"26, *Morchella conica* P, on charcoal, fern gully, Lake Bonney, S.A, Miss Wehl" [MEL2367923]	–	"26, *Morchella conica* P." [stored with specimen, MEL2367923]	–	–	–	–
Peziza lepida Berk. & M.A. Curtis	A-27	–	–	–	–	–	–	–	–	–
Peziza vesiculosa Bull.	B-18	Mueller (1889b)	–	"18, On stoney range, *Peziza vesiculosa*" [MEL58917]	–	–	–	Sheet 19. "*Peziza vesiculosa*, Bulliard"	–	–
Peziza sp. [Possibly an earlier identification of the collection listed above as *Ombrophila radicata*, as the number '2' matches]	B-2	–	–	–	–	–	–	–	–	–
Peziza sp. [redetermined on the specimen as *Pyronema* "prob." *omphalodes* by H.J. Larsen Jr]	B-32	–	–	"*Peziza*, orange, 32, Melbourne, Miss Wehl", "*Humaria omphalodes*, near Melbourne, Miss Wehl" [MEL58198]	–	–	–	–	–	–
Polyporus sp. [redetermined on the specimen as *Trametes cinnabarina* (Jacq.) Fr. by unknown identifier]	–	–	–	"*Polyporus*, Lake Bonney, 1887, Miss M. Wehl" [Handwriting is F. Mueller], "*Trametes cinnabarina*, Lake Bonney, Miss E. [sic] Wehl, 1887" [A different handwriting] [MEL1055124]	–	–	–	–	–	–
Scleroderma vulgare Hornem. [*S. citrinum* Pers.]	B-29	Mueller (1889b)	–	–	–	–	–	Sheet 19. "*Scleroderma vulgare*, Fries"	–	–